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AMERICAN FORESTS

OID BUTLER, Editor

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PUBLISHED MONTHLY

1727 K STREET • WASHINGTON, D. C.

35c A COPY

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YESTERDAY AND TODAY ON THE

PISGAH GAME PRESERVE



Fifteen years ago the Pisgah Preserve was stocked with deer and elk. They were crated and shipped by rail to a railroad station near Asheville and then transported overland to the Pisgah National Forest.



A scene in December, 1932, when an area of the Preserve was opened to regulated hunting for a short period to reduce the deer population to its food supply. Each hunter had to have a special permit to go on the Preserve. Photographs show hunters checking in at Forest officer's station for a day's hunt.



AMERICAN FORESTS

Vol. 39

MARCH, 1933

No. 3

REGULATED HUNTING ON THE PISGAH

AN EXPERIMENT IN CONSERVING DEER HERDS BY REDUCING
EXCESS POPULATION THROUGH CONTROL OF HUNTERS

By C. E. RACHFORD

STARLIGHT. The forms of hunters silhouetted against the flickering flames of a large camp fire. Well, maybe there's nothing so spectacular about that—about hunters going to the woods or crowding around a camp fire. They have been doing that for hundreds of years, and no doubt will continue to do it for hundreds of years more, providing there is game to be killed. But this assembly of hunters was different. It marked the initial step in an experiment to determine the feasibility of so regulating hunting that the wild life population of a region can be maintained at its optimum and on a sustained yield basis. Whether there will be game to be killed in the future depends largely upon the application of some such principle.

But to carry the scene of the hunters and camp fire a little farther. Location, the Pisgah National Forest and Game Preserve in North Carolina. Time, 5:30 a. m., December 5, 1932—a cold, frosty morning. The odor of scorched clothing or leather, occasioned by that perfectly natural instinct to keep both sides warm at the same time. Ages of hunters, sixteen to seventy years. Firearms, all sizes, makes and bores, from shotguns loaded with bird shot to the old Daniel Boone muzzle-loading rifle. Garbs ranging from neat business suits with white collar to rubber boots, upland game bird hunting coats, suits of Hudson Bay Company's blanket cloth and high top boots. Conversation, from "places I have hunted," with details of species and numbers killed, to "how do you hunt deer anyway?" In a word, an extremely diversified and picturesque group of American hunters, gathered from twenty states. What had brought them together—the desire to witness an experiment or the age-old spirit of the chase?

For answer, one must turn to the Pisgah National Game Preserve consisting of 98,513 acres of Federal land within the Pisgah National Forest in the State of North Carolina. The area was originally owned by the late George W. Vanderbilt, who more than thirty years ago dedicated it to the first large-scale effort to practice forestry in the United States, including the development and improvement of the native wild life which had been almost exterminated through

unregulated hunting. In the early years of Mr. Vanderbilt's work, a few deer existed on the area and a few more were imported from Florida and New York. Mr. Vanderbilt's untimely death, however, put an end to his plans. The bulk of the timber was sold to lumber companies, and the Federal Government purchased the land under the Weeks Law, subject to timber-cutting rights previously sold by the estate. At the time of purchase by the United States it was estimated the area contained not more than 1,000 white-tail deer, a few bears, numerous fur-bearing animals, and some native game birds.

Shortly after it was placed under administration as a National Forest, the State of North Carolina ceded to the Government the right to prescribe the necessary regulations with regard to control of wild life within the area. From January, 1915, to October, 1916, the forest was open to public hunting, but it soon became apparent the deer were being rapidly reduced and that steps must be taken to provide complete protection for the herds. This was accomplished by establishing the Pisgah National Game Preserve under the Act of August 11, 1916, and by Presidential proclamation of October 17, 1916. It is important to remember this date, as it represents the first of several steps in game administration.

Following the creation of the game preserve, warden service was increased and a campaign against trespass was initiated which still continues. These protective measures resulted in yearly increases of the deer herd until in 1929 it became evident that on certain portions of the area the number of deer was approaching the carrying capacity of the deer range. Investigations and studies were immediately begun to determine the areas on which further increase of deer would be unwarranted. These studies indicated that the game preserve as an area from which deer will drift to outside areas fails to accomplish its purpose because of the natural habits of the animals and the conditions prevailing on adjoining areas. They also indicated that within the preserve concentration of deer on limited areas was resulting in overutilization which salting and other attempts at redistribution



The 14,000 acre area on which shortage of food supply was most apparent and where the hunt was held. The number of deer to be removed from each unit was determined and the hunt controlled so that not to exceed that number would be shot.

failed to relieve. Recognizing that if these conditions became widespread, remedial measures would be necessary, the Forest Service took steps to remove some of the surplus deer by trapping them alive and using them for restocking areas outside the preserve.

Three years' experience, however, proved the measure only mildly effective in regulating the number of deer to the food supply. By 1932, conditions showed a progressive decline in the amount of browse, which forms the principal food for deer during the critical period from January to March, with the result that the seedlings and sprout growth of some commercial tree species and rhododendron, laurel, leucothoe, galax, and teaberry were being severely damaged or destroyed. Over-utilization of huckleberry, serviceberry, elderberry, blackberry, sumac, and other species became apparent on areas on which the deer concentrated during the other eight or nine months of the year. The conditions were clearly a danger signal, which, if unheeded, would lead to the eventual destruction of the food supply and the deer themselves as has happened on the Kaibab Plateau in Arizona where the deer population was permitted to outgrow its food supply.

The Forest Service therefore decided to take a new and progressive step in administration by removing the surplus animals through regulated hunting. Since the technique of regulated hunting had not been fully developed, and since the degree to which human accidents and wounding of animals could be prevented would largely determine the success

of the effort, it was decided that the initial project would be quite limited and on a purely experimental basis. Carefully planned in advance, an attempt was made to provide for every contingency.

An area of 14,000 acres on most of which concentration and overutilization were apparent, was selected. The area represented almost ideal conditions of topography and accessibility in that a road ran through the center of the tract and could be closed without inconvenience to the traveling public. A census of the deer population was made by a crew of game wardens, which showed a stocking of approximately one deer to twenty-one acres, or 665 deer within the 14,000 acres. After a study of range conditions on representative areas, it was decided that a maximum of 250 deer might be removed without impairment of the breeding herd. This would at the same time reduce the herd to a number which might be maintained as the permanent capacity of the area.

Following the principle, then, that the different portions of the 14,000-acre tract were not the same in deer population or condition of forage, and also in order to prevent concentration of hunters, possible overkill on some areas and underkill on others, such as is now universally taking place under present State practices, the 14,000-acre shooting area was subdivided into ten units. The number of deer that could be removed from each unit and the number of hunters to be assigned to each was determined.

The investigations of the area indicated a disproportionate number of bucks to does. In view of the average hunter's preference for bucks, it was felt that the ratio between sexes would not be unnecessarily disturbed by establishing a limit of one deer of either sex to each hunter. Previous investigations of the mating season and climatic conditions dictated a season of hunting from December 5 to December 24. In order to complete the program in the time set and provide a reasonable opportunity for the hunter to shoot a deer, as well as to distribute the opportunity to hunt among the greatest number, each hunter was allowed a period of three days. Because of the character of the country, the conditions normally prevailing on the area, the season selected, the inexperience of the average hunter, and the inability of some to meet scheduled dates, it was believed that selection of 400 hunters would remove the number desired.

In developing the plans the local Forest Supervisor had the support and cooperation of the North Carolina Depart-

ment of Conservation and Development. The Pisgah National Game Preserve is Federal property maintained at public expense for the benefit of all the citizens. As already stated the State early ceded jurisdiction to the Federal Government in developing regulations necessary to the administration of wild life. Under these circumstances it seemed only fair that the citizens of other States should be accorded the chance of hunting without the usual non-resident State or county license, but since the Federal Government had no funds with which the project could be conducted, measures had to be taken to make the project self-supporting. The estimated cost was calculated and each hunter was required to finance his share by the payment of \$4.00.

It was anticipated that applications to hunt would be far in excess of the number of hunters that could be accommodated, and to avoid any allegation of favoritism, a mechanical system of selection was followed. Through the cooperation of the Asheville Chamber of Commerce, a public drawing was arranged, notice of which was widely announced by the press. As applications were received by the Supervisor, they were assembled in the order received in packages of ten and deposited in a basket. When the public drawing was held on November 17, 1,292 applications had been received from residents of twenty States, the District of Columbia, and Puerto Rico. Out of the total, forty packages containing the 400 lucky applications were drawn, and in addition 100 names were drawn as alternates. Out of the total number of successful applicants, including the 100 alternates, 165 declined. A few, however, made their payments but were unable to hunt because of unavoidable circumstances. Of 335

hunters scheduled, 315 or ninety-four per cent reported on scheduled dates.

In order to prevent human accidents, assign hunters to their respective units, and see that each hunter was out of the woods at the end of each day, a checking station was established where guns were inspected and sealed for those who occupied camp grounds within the Forest and where hunters were checked in each morning and checked out each night. The necessary equipment for dressing deer, pit for refuse, and weighing facilities were maintained. Measurements and notes on each deer killed were also taken. No automatic or scattered shot firearms were allowed. Rifles had to be 25 calibre or larger. Not over 70 hunters were on the shooting area during any one day. Each hunter was required to sign a cooperative agreement to observe the conditions and rules governing the hunting.

Because of the number of hunters and the danger of accidents to the traveling public, the use of the road through the area was allowed only to Government trucks which transported the hunters to the area in the morning, returned them with their deer to the checking station in the evening, and made scheduled trips throughout the day to pick up hunters who might wish to leave the area early with their kill. As the hunters checked in each morning, groups were assigned to specific hunting units and placed in charge of a patrolman, who assisted them in bringing in their trophies and who gave practical suggestions on hunting practices, dressing of deer, and general information on the country and local hunting conditions.

During the twenty days of controlled hunting, a total of 191 deer were killed, of which 124 were bucks and sixty-seven does. In other words, sixty per cent of the 315 hunters were successful in capturing a deer. The percentage would no doubt have been greater had it not been for unfavorable weather conditions during a part of the season. The average weight of bucks was ninety-three and one-half pounds and of does sixty-five pounds. One eight-point, 186-pound buck had a spread of antlers of twenty inches. Throughout and immediately follow-

A close-up of over-utilized conditions in the Pisgah, showing laurel browsed almost to the point of destruction.



Deer browsing in Pisgah Game Preserve where the increase in numbers is resulting in over-utilization of the deer range.



ing the hunt a careful search was made for wounded or dead deer left on the area and thirteen were located. There were probably a few additional animals killed which intensive search failed to discover, but it is reasonable to assume that in all, not over 215 deer were killed. All good carcasses found by patrolmen were turned over to public institutions.

One important factor in safeguarding human life and at the same time providing better hunting conditions for all was the division of the shooting area into units and the consequent fairly even distribution of hunters. In each unit, a special patrolman with five to ten men under his immediate supervision was able to keep fairly close track of his group and also to distribute them to the best advantage over the hunting unit. Of course with such a large number of hunters on the area, one might expect to find a few "game hogs" — the type of hunter that respects no law or regulation and shoots anything and everything within and out of range. To the credit of the hunters on the Pisgah area, suspicion of "game hoggishness" was cast on only two men.

"Buck fever" is a common disease among deer hunters and the Pisgah hunters were not entirely free from it. There was the man who claimed his gun was not shooting and only by force was he prevented from taking his companion's gun. There was also the hunter who "forgot he had a gun" while his companion's shot brought down one of two fine bucks. One man hunted assiduously all day long with his gun cocked and the safety off, ready for immediate action. Near the end of the day a fine buck jumped out from almost under his feet. He immediately threw on the safety, and desperately kept pulling his locked trigger while the deer peacefully and safely loped out of sight.

Toward the end of the shooting, late one afternoon a bearded mountaineer from Avery County on the slopes of Grandfather Mountain, who said he had not been deer hunting in forty years, came into the checking station dressed in homespun and a black felt hat. He had an old Daniel Boone muzzle loading rifle of about forty calibre and a wicker basket of grub. He was ready to go to the mountains to hunt a bit, he said, and he had the look of the skilled old timer. Next morning he checked in at 6:00 a. m. By seven he was

on his unit. He came out on the 10 o'clock truck with his buck, thrilled to the bone and looking twenty years younger. Throughout the hunt, the spirit of good sportsmanship was exemplified on every hand. For instance, there was the man who started from Evansville, Illinois, in an automobile, had a breakdown enroute, and took the train to arrive in time for his scheduled hunt. Eagerly he sought information on rules and best hunting practices and enthusiastically he shouldered his gun. But he misjudged his physical condition, and that night he was compelled to seek the aid of a physician who advised against further hunting. On leaving

the doctor's office, with disappointment all over his face, he still could send the local Forest officers his appreciation of their efforts and courtesy and say: "Tell the boys I had a bully good time. I saw a bear, which makes the trip well worth while."

Sixteen years have elapsed since the first step in game administration was taken on the Pisgah Game Preserve. During that time all other uses of the land have been developed. Timber has been harvested with an increasing supply of deer food resulting, recreation has increased by leaps and bounds, streams have been made more productive of fish. Game has increased to a point where, under reasonable direction, utilization of the game crop is now possible. In a word, the Pisgah area demonstrates what coordinated land use means and what might be done with many immense tracts of similar land in the southern States.

The first step in game administration on the Pisgah Game Preserve, namely, building up the stock through protection, has been successfully taken. The second

step, namely, regulated utilization on a sustained herd basis, has been initiated in an experimental way and the technique of regulated hunting is being developed. Its success will enable extension to other areas, but it will not be the final step. Only when the right number and class of deer are removed from each area requiring removal of surplus, when losses by wounding have been reduced to a minimum, when every hunter is instilled with a fine spirit of sportsmanship may we say the climax of game management, i. e. regulated kill, has been reached.

THE FOLLOWING RULES APPEARED ON THE BACK OF EACH PERMIT ISSUED BY THE FOREST SERVICE FOR GOING UPON THE PISGAH NATIONAL GAME PRESERVE TO KILL DEER

The killing of deer under this agreement is permitted on a certain designated area outlined on map posted at Forest Ranger office, Pisgah Forest, North Carolina, and at the central checking station on Davidson River and as posted on area. Hunting or killing deer on any other areas of Pisgah Preserve is prohibited.

Persons securing a cooperative agreement may hunt or kill one deer upon the designated area. A license from the State or county is not required in killing a deer within the Pisgah National Game Preserve.

Shooting shall not be done upon, from, or across any public highway. Hunting or shooting shall not be done with or from automobiles. Firearms shall not be discharged within one-fourth mile of any building or improvement.

Hunters who desire to stop at White Pine Camp Ground (only area that hunters can use for this purpose) must have all firearms sealed by a Forest officer upon entering camp ground. Seals may be broken only by authorized officers.

Only rifles of nonautomatic type of not less than 25-20 caliber, and nonautomatic shotguns not less than 16 gauge shooting single ball or pumpkin cartridge will be allowed. All ammunition must be of soft-nose type.

Wounded deer are to be followed by the hunter responsible and killed if possible. If necessary to go into a closed area hunter is to be accompanied by a Forest officer.

All deer killed must be brought into central checking station. Killing other than that herein specified is prohibited.

This cooperative agreement must be presented to the Forest officer in charge of the area.

This permission to carry firearms on the Preserve meets requirement of paragraph B, Reg. I—governing hunting, Pisgah National Game Preserve.

These regulations are promulgated under the authority of the Secretary of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE,
J. C. Kircher, Regional Forester.



TRAILS OF THE WILD

THE SOUTH FORK COUNTRY OF MONTANA, ONE OF THE GREAT REMAINING WILDERNESS AREAS IN THE UNITED STATES, INVITES THE "TRAIL RIDERS OF THE NATIONAL FORESTS" IN JULY

JUST NORTH of the little town of Missoula, and west of the Continental Divide in Montana, lies 625,000 acres of rugged primitive country. It is the South Fork region of the Flathead National Forest, the most rugged and perhaps wildest remaining wilderness in the United States. Into this country "at the back of beyond" The American Forestry Association's "Trail Riders of the National Forests" will venture in July.

No roads lead into this great forest wilderness. Reached only on foot or with saddle and pack horses, it remains as it always has been—an untamed land of romance and adventure. Few people have penetrated its fastness, fewer still know it intimately. Some of its secrets are known to its guardians, forest rangers and smokechasers, and to occasional trappers. A few hardy geologists have tapped their way here and there, studying its remarkable structure.

But to others, this country of lofty mountains, dramatic in their boldness, the summits of which rise above green-mantled slopes, where never-failing streams run vigorous and cold, now leaving the virgin forest, now meandering through flowered meadows, remains mysterious and enchanting. It is a land where bears, deer, elk and mountain goats live practically undisturbed by man, a country a hundred miles from the sound of a locomotive, and two day's journey by trail from the noise of an automobile horn.

Its scenic value is without parallel. Along the eastern edge the peaks and ridges of the Continental Divide rise in huge escarpment. Against the sky of early morning they stand silhouetted in violet and blue; the flat lighting of late afternoon brings out details of green timber and silver limestone cliffs.

To the west rise the bulky summits of the Swan Range which look down on beautiful lakes in rocky basins formed by ancient glaciers. From this range lovely valleys, among

which is the canyon of Little Salmon Creek, lead down to the main floor of the South Fork.

Ages ago a great glacier, born beneath the high peaks now known as the Holland Range, pushed its way downward and eastward and scoured out the valley of Big Salmon Creek, a magnificent expanse of green beauty. This glacier has disappeared long since, but the valley remains as evidence of the tremendous force of this river of ice. Near the mouth of this valley is Big Salmon Lake, a most beautiful sheet of mountain water cradled between green forested slopes. Rarely does one see a lake more lovely or unspoiled.

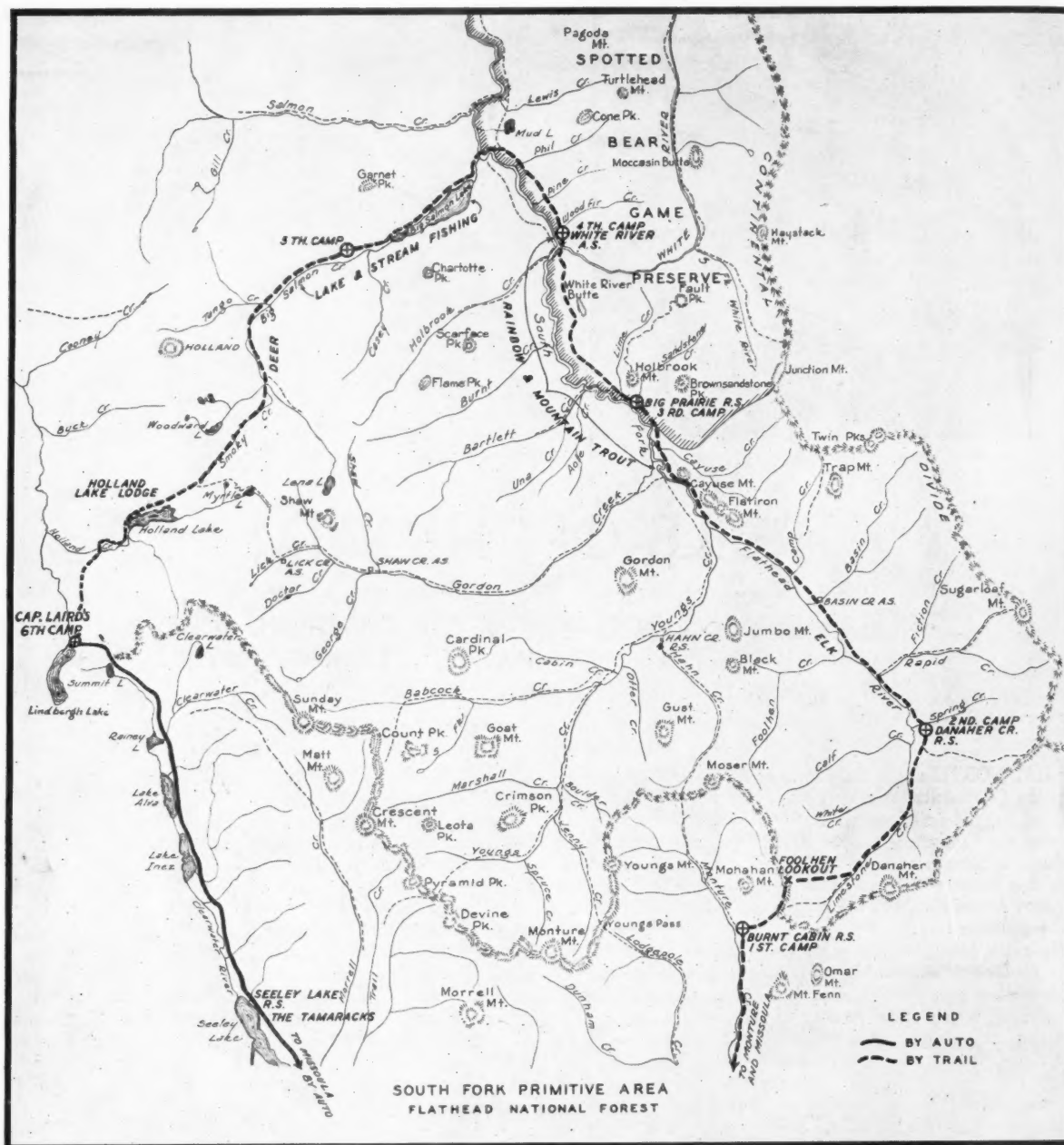
Around this lake and through the valley of Big Salmon Creek, the trail of the "Trail Riders of the National Forests" will lead. Few have followed this unblazed way—few will. For the wilderness that mothers it will remain unspoiled, inviting occasional and appreciative audiences such as the Trail Riders. It is a spectacular panorama of bold mountain beauty, with foaming waterfalls, dark canyons and flowered meadows sharing the stage with the rugged peaks. Elevations change with breath-taking abruptness, rising to 10,000 feet and falling to 4,000 in spans of a few miles.

Beyond the valley of the Big Salmon the way lies up the glaciated valley of Smoky Creek to mountain top basins where small hidden lakes throw back shafts of sunlight, and where the small meadows are veritable gardens of alpine flowers. From here, to the south and north, extend the great peaks of the Swan Range, ahead rises the great Mission Range with its snow fields and glaciers, and twenty-four hundred feet below lies Holland Lake, a timber-girt body of water two miles long, on the shores of which the Trail Riders will camp.

Six days of wonderment, of marvel, of undreamed-of beauty! Nature unchanged for centuries. Mountains that lose their peaks in the clouds, canyons that sink out of sight,

virgin forests that unfold as the sea, cold snow water forming hundreds of unknown lakes in glacier basins, wild life in

all its unspoiled beauty. These are some of the secrets of the South Fork Wilderness that await the Trail Riders.



TRIP NO. 1—INTO THE SOUTH FORK PRIMITIVE AREA, FLATHEAD NATIONAL FOREST

- July 10—Missoula to Monture by Automobile. 70 Miles.**
Early lunch at Monture; then "boots and saddles" into the back country.
Monture to Burned Cabin. 9 Miles.
Saddle trip up Monture Creek to a beautiful campsite.
- July 11—Burned Cabin to Foolhen Lookout. 7 Miles.**
On up east fork of Monture Creek to Divide; a fine view of the South Fork country; lunch with the Forest Service Fire Lookout and demonstrations of his work.
Foolhen Lookout to Danaher Creek. 8 Miles.
Wonderfully scenic country; high peaks, tumbling streams, green timber.
- July 12—Danaher Creek to Big Prairie. 18 Miles.**
Through "The Basin," past Flatiron and Cayuse Mountains; down the South Fork past Big Prairie Ranger Station.

- July 13—Big Prairie to Mouth of White River. 7 Miles.**
Short trip along the South Fork of the Flathead River. Unusual scenery and good fishing.
- July 14—White River to Big Slide. 12 Miles.**
Up Big Salmon Creek; lunch beside Salmon Lake, with opportunity for lake fishing.
- July 15—Big Slide to Laird's Recreation Lodge. 18 Miles.**
A climb to the Divide by way of Smoky Creek; innumerable lakes; descent to Holland Lake where automobiles are waiting; swim in Lindbergh Lake; night at Laird's Lodge.
- July 16—Lindbergh Lake to Missoula. 82 Miles.**
Dip in the lake, the automobile to Missoula, with lunch at the Tamaracks on Seeley Lake. Arrive in Missoula in time for train connections.



Anyone who has known the joy of living in primitive surroundings needs only the opportunity to seek new adventure—an opportunity that is offered on July 10 when the first group of "Trail Riders of the National Forests" leaves Missoula, Montana, for six exhilarating days in the great wilderness of the South Fork of the Flathead River, in the Flathead National Forest. To those who have never known the beauty of the wilderness trail the trip will prove an experience to be cherished throughout life.

Riding under the direction of The American Forestry Association, with the cooperation of the United States Forest Service and the Northern Pacific Railroad, the trip offers an opportunity never before made available to lovers of the out-of-doors. Forest Rangers will ride with the party, expert wranglers, guides and packers will serve every need of the trail.

The cost of the expedition is unusually low, and within the reach of everyone. All expenses for the six days—from Missoula back to Missoula—with the exception of bed rolls, will amount to \$43.75—a little more than \$7 a day.

The second expedition of the Trail Riders is scheduled for August, into the romantic Sun River Wilderness of the Lewis and Clark National Forest, of Montana. In the April issue this trip will be described in full.

Ride with the "Trail Riders of the National Forests" under the auspices of The American Forestry Association. Upon request, the Editor will give you full details.



Above: Holland Lake, two miles long, a silver gem in the virgin forests of the South Fork Wilderness. Below: Looking into the heart of the forest wilderness where the "Trail Riders of the National Forests" will go in July.

DEPRESSION WOOD SHOPS

West Virginia Coal Miners Utilize Standing Timber, Toy-Crates, Discarded Crossties, and Abandoned Mine Shanties in Cooperative Furniture Factories

By DAREL MCCONKEY

COAL is wood that is older than the hills; the hills were built upon it.

When the demand wanes for products from these lamplighted primordial forests, when the subterranean woodcutter cannot provide for the needs of his family, it should not be surprising, in terms of ultimate sources, that miners should alter their occupation from delving in primeval forest residue to craftsmanship in contemporary wood.

How certain West Virginia coal miners did make this occupational shift, in order to defeat the depression, is a fascinating story. Personal and sectarian modesty make completeness of narration impossible, but the principal lines of the story are clear.

When Herbert Hoover completed the rehabilitation of post-war Belgium, a considerable lump of the American fund he used was still intact. The unused principal accumulated for several years. Hoover, the war-time conservationist, became President. A survey on the effects of the depression was made in 1932 by his Children's Bureau, and by other research agencies.

Nowhere in the country was found greater need than among destitute social groups in West Virginia's coal fields. The residue of the Belgian fund was amplified by personal donations, largely anonymous, and the Service Committee of the Society of Friends, or Quakers, was asked to take charge of its wise disbursement.

Children in the northern West Virginia coal fields were starving. "Soup-kitchens" were established for their relief. It was a joy to see the wan, peaked faces of the starvelings light up at the prospect of food, to see, in the course of days and weeks, their thin little bodies respond to suffi-

cient and well-proportioned nourishment. But what of the adult need? What of the men and women, weakened not only physically, by lack of food, but psychologically, by their bleakly dark economic outlook? The staff of the Friends' Society social workers—Miss Alice Davis, that amazingly vital person whose sociological experience has extended over several continents; agreeable Dan Houghton, the engineer; bluff, hairy-chested "Sunny" Morris, in undershirt and mackinaw; young, clean-cut Bill Simpkins and his charming young wife—concentrated their most incisive individual and group thinking on the problem.

A clue was offered by shoes. Feet shuffled up and down

muddy mine settlement streets in shoes that had no soles, shoes with gaps between uppers and soles, shoes pathetically patched with burlap and rags.

Cobbler's shops were opened. Those who knew the tricks of awl and last and waxed ends were furnished subsistence for repairing, free of charge, the shoes of their poverty-stricken neighbors. A certain need was met by this ven-

ture, but for final rehabilitation the cobbler's-shop venture carried little hope. Sewing classes were organized. Women busied their nimble fingers at cutting, fitting, mending, and making over clothing collected by the Morgantown Council of Social Agencies. The inexpensive, helpful, socially pleasant "sewing-bee" was fostered and encouraged. This, too, was a community aid, but left unsolved the greater question.

The Friends' social workers eyed each other with hopeful questioning when they met at headquarters or in the field. "What is the answer?" the interrogative flashed, word-



Making money once again. Ex-miners to whom pick and shovel, cutting machines and blasting powder were tools of common usage, learn the secrets of carpentry and cabinet making in the West Virginia depression wood shops.

lessly. But always, in optical semaphore, came back the hopeless shrug, the slow negation, the "I don't know."

Then an important event occurred. A man in Madsville, mining suburb of Morgantown, had a set of carpenter's tools. He was an accomplished workman. If he only had a shop!—A shop was provided in the basement of a school building. He had no funds to buy lumber!—Arrangements were made for that. New hope flamed in the thoughts of the social workers. If these unemployed miners could build furniture—imitation antique, for instance! A meeting was called to inquire into the possibilities of the new enterprise. Sociologists, social workers, volunteer aides, were there. By accident or design, Thomas W. Skuce, West Virginia extension



Jim Chicarelli at his bench. It was Jim who made first contribution to the wood shops of a huge soup spoon, thirty inches long, whittled with a jackknife out of a discarded crossie. Now he has mastered the intricacies of the carpenter's bench.

forester, was present. "I understand," Miss Price was saying, "that the Kentucky mountaineers have been successful in building and marketing sturdy old-fashioned furniture. We might send for their expert to come up and help us."

"Why go to Kentucky," cut in Skuce, "when the man who taught the Kentuckians how to make furniture is right here in West Virginia? The man you want is Bud Godlove, over at Wardensville."

A Macedonian call was issued for Bud Godlove, the man who "got two things from my old Dad—one of 'em was the pattern of his chairs, and the other was a good wallopin' if I didn't build 'em right." For years Bud had been wheelwright for the several tanneries in eastern West Virginia. A wizard with wood, he could with a few odds and ends of motors, machinery, and what to anyone else would be pure junk, set up turning-lathes, drills, vises, bandsaws, and all the accoutrements of his trade.

"I had to run the gauntlet of a flock of fierce man-eatin' black panthers to git out of the Eastern Panhandle," said Bud, with a grin, when he appeared for work. "But I got through. Can't stay long."

He stayed five months. His first shop, in Crown mine settlement, was located in an unoccupied mine company store, donated for the purpose. Three shops were equipped at three effective locations, and personnel—mostly men to whom carpentry and cabinet-making were absolutely alien as occupations—was trained for each.

Suitable lumber was a problem. Then, it was recalled that a carload of toys had been shipped from Washington on Christmas Day, 1931, following the Hoover Yuletide party at the White House, and mine children in the Morgantown coal field had received the gifts. The crates were still available. They were used to build the first consignment of miner-made furniture. The pieces were not so expertly done as the subsequent output, but it was a beginning.

That reasonable lumber was not to be had within reasonable price limits daunted the resourceful wheelwright of Wardensville not in the least. "Go to the woods fer it," he said, with pioneer simplicity. Men to whom pick and shovel, cutting-machines and blasting powder were tools of common usage, learned for the first time the "heft" of an ax,



This drill press, like all equipment in the shops, was made by the ex-miners from "material at hand."



These pieces are typical of the excellent craftsmanship represented in the products of the miner-carpenters, made from "green" timber, crates and abandoned mine shanties.

learned to refrain from "riding" on their end of a crosscut saw. Accustomed to breathing the carboniferous black fog of coal dust in the soggy atmosphere of a mine, they came to know the exhilarating odor of fresh sawdust in the invigoration of clean wind. They cut the logs into proper lengths, split them "with the grain," and carried them, by manpower, to the shop.

The wood was green, and required curing. "Need a dryin'-kiln, eh?" said Bud Godlove. "Now that back room has got a gas heater in it. I reckon we could dry the stuff there." The room was metamorphosed into a drying-room. "Cure yer hick'ry splits fer backs an' rounds, but keep yer chair-posts green," counseled Bud. "Then when ye've fitted yer chair together, the posts shrink, and ye've got a j'int as tight as if it'd growed there."

Chairs that fit the back, rockers offering genuine relaxation, dining-room chairs that are sturdy and comfortable, children's high-chairs that will not tip backward, old-fashioned gate-leg tables, a dozen varieties of stools, cobbler's benches of an old and all-but-forgotten pattern, suitable for serving tea—these and many other articles are included in the products of Bud Godlove's three depression shops.

"When the sap gits up in the spring," said Bud to his pupils as he departed, "ye kin git oak splits an' hick'ry bark for weavin' chair-bottoms. This here rattan'll do till then, but ye can't lick oak splits an' hick'ry bark fer chair-bottoms."

By Christmas fifty men were employed on a full or part-time basis in the three shops at Canyon, Bertha, and Crown, and there was a steady output of attractive craftsmanlike furniture. The men are paid on the time-worked basis, depending on the return. It is more economical to teach novices a few operations than to teach them all; the piece-work basis was thus ruled out. Men who had been without occupation or pay for a year, or two years, or even more, were making money once more. It was not much, but it was something, and the satisfaction of creative and useful work was theirs.

To meet the sales problem, a vacant storeroom in Morgantown's leading hotel was donated, rental free, until it can be let by the management on a paying basis. It is a good location, and the business has done fairly well. Sales are made by Morgantown women volunteers, and there is lively competition as new total-sales records are established. With the spur of friendly rivalry high-pressure saleswomanship has developed into a passable art among those who "take their turn at the store."

The furniture making business was well launched when someone remembered Jim Chicarelli and the soup spoon. It was in the earlier days of the Service Committee's reign in the coal area, when the principal occupation of the Friends social workers was the maintenance of soup-kitchens for children. "We need a big soup spoon," somebody said.

"I'll git you a soup spoon," said Jim, and disappeared. Three days later Jim sauntered diffidently up to the soup-kitchen, carrying a huge wooden spoon, thirty inches long. It appeared, on inspection, to have been hand-carved.

"Where did you get this spoon?" Jim was asked.

"Made it," said Jim, noncommittally.

"Made it! But what did you make it from?"

"Oh," Jim responded bashfully, "jist whittled it out of a crosstie."

Three days' work with a jackknife and a crosstie! Jim was thanked for the soup spoon, but more pecuniary gratefulness awaited him. A use was found for Jim Chicarelli's jackknife talents, and for discarded crossties. If you are fortunate, you may some day have your salad served with a wooden spoon and fork Jim "jist whittled out."

From furniture making for the men to rug weaving for the women is but a logical step. Mrs. Gilbert Scott of Elkins, West Virginia, for many years connected with farm women's activities in the State, was imported, with a loom,



Following the Hoover Christmas party at the White House in 1931 a carload of toys was shipped to mine children near Morgantown. The crates in which they were shipped were used to fashion these pieces in the first miner-made furniture.

to teach the art of making rag rugs. Director Nat T. Frame, of the West Virginia University Agricultural Extension Service, one of the nation's foremost practical rural sociologists, assisted in forming a mine women's cooperative manufacturing and sales organization.

One of the principal problems in rag weaving was a supply of rag strips. Out of this need evolved another absorbing chapter in social and economic rehabilitation. A clearing house existed in Morgantown, where old clothing was donated and distributed. But, reasoned Miss Davis, real rehabilitation consists in giving something for effort, not in giving something for nothing. "We'll sell the clothing," she said, "for a consideration—"

Some of the women, negro and white, had never used a needle. It was necessary to teach them how to cut the rag strips, how to sew them together. Supervised "rag-sewing bees" were held. And, as the idea developed, it was not uncommon to find a dozen women in one house, industriously ripping strips of colored cloth and "tacking" the ends together, while singing folk songs from their various homelands. Even in this domestic process the re-utilization of wood-fibres was not unknown, particularly when artificial silks, derived from wood, were prepared for weaving into rugs of the finer grades. Each woman rolled her connected strips into a ball, and weighed it.

Each Saturday morning Miss Davis opened her "old-clothes store" at a central location. The clothing, it is true, was donated from the clearing house in Morgantown, but in Miss Davis' store each garment was priced. Priced, not in dollars and cents, but in ounces. Ounces of what? Ounces of rags! With this odd currency clothing might be purchased for an entire family.

There is a curious contrast between this contemporary ounce-exchange and that of another period and locale in American history. In 1849 California also used the ounce as a unit of currency. But it was the ounce of gold. Thus, the gap between the peak of inflation and the pit of depression is epitomized by the disparity between ounces of gold and ounces of rags.

The turn of the New Year found five

women engaged in weaving, while about fifty women were providing them with rags. The rag-market declined somewhat, however, when from simple weaving of rag rugs the women graduated to the more complex and lovely pattern-weaving, of the type of the old-fashioned coverlid.

Toy-crates for furniture making, standing timber for the same purpose, and old railroad ties for "whittlin' out" salad forks and spoons, however, did not represent the ultimate in wood-utilization to overcome the depression. Late in November Miss Davis was approached by a man of foreign extraction, long without benefit of employment.

"Mees Davis," he said succinctly, "I mek very nice theengs with—what-you-call?—the jeeg-saw."

"The jig-saw, yes," encouraged Miss Davis.

"Soon, I cause me to theenk, it be Chrees'mas come."

"That is right."

"Mebbeso I mek with the jeeg-saw some Chrees'mas playtheeng to sell."

"That is a very good idea," agreed Miss Davis. "But where will you get the wood?"

"I cause me to theenk," he replied, "there is place in our veelage where coal mine has been but is-no-more. Mine props, peelars, pull out, ground go down this place, mek hole to come there. Mine shantee which was there go lop-side, all bus'-opp, no good. Mebbeso, I theenk-me, I mek toys from those board—w'at you theenk?"

And another source of wood-utilization was found—Christmas toys from broken-down mine shanties. The man made and sold sufficient toys to provide for his family an unusually Merry Christmas. Nor was this man's home the only one brightened at Christmas time by utilizing discarded wood — remnants of crates and boxes,

crosssties and abandoned mine shanties. Many caught the spirit and the children of the more fortunate found their trees well decorated by miner-made toys.

Looking at it from an economic viewpoint, there is still a depression among the West Virginia coal miners. The mines are still silent. But wood, even though it be waste, is serving them again.



Bud Godlove, a "wizard with wood," who schooled the unemployed miners, and who set up turning-lathes, drills, vises and bandsaws made from odds and ends of mining machinery and other "junk" at hand.



With no money to buy lumber, the miners went into the woods and "cut it green," drying it by a gas heater in a back room of one of their shops under Bud Godlove's direction.



Cork trees of this size are rather rare. Although picturesque, they usually yield inferior cork.

THE ROMANCE OF CORK

By P. L. BUTTRICK

Photographs by courtesy of the Armstrong Cork Company



SOME of my friends suggested that in becoming associated with the cork business I was entering one of dubious utility, referring of course to the intimate association of cork with bottles charged with liquids not always innocuous. No one who has gone over the side of a ship into a life boat takes that view of the industry that provides the cork life preserver always ready in his cabin.

Perhaps the housewife who is so proud of the durable and attractive linoleum in her kitchen, pantry, bathroom, and more and more frequently livingroom, does know that cork is one of its important ingredients. If so, she also regards the cork industry favorably. Automobiles like to know how much gas there is in the tank and object to oil leaks in the engine. A cork float is part of the gas gauge as well as of the carburetor, and it is not the cork's fault if they sometimes function erratically. A composition cork gasket seals joints in the engine, and strips of the same material are used to prevent squeaks and rattles in the body. Would that some manufacturers used

more of them! One could use several columns listing uses of cork in all walks of life from shoes through telephone receivers, fire bricks, textile machinery to table mats and sun helmets. All these are important but minor uses. The bulk of the more than 200,000 tons of cork which the world uses

annually in normal times is for low temperature insulation. Ground up and pressed into boards and pipe casings, it covers the walls and pipes of thousands of cold storage plants, meat packing establishments, oil refineries and other places where temperatures below those comfortable even for an Esquimo are needed. Probably more cork is used to assist in the freezing of ice cream than to stop bottles of anti-Volstead beverages. Corks are an increasingly minor element in the cork business.

But what is cork, anyway. Most people know that it comes from a tree vaguely associated with Spain. Some know that the tree is an oak, but I have been asked whether the cork was its wood or its fruit. It is the bark. A few barks are useful to humans as well as trees, but it is generally



A mature cork tree which has never been stripped. There are few such trees left in the world. Compare with this the smooth, even-textured bark of the stripped tree on the right.

necessary for us to kill the tree to get the bark. Not so with the cork oak. Like the birch whose outer bark was removed by Hiawatha to make his canoe, the cork oak grows itself a new outer bark and can repeat the process after each stripping. The first crop is called *Virgin* or *Male* cork. It is strongly ridged and of uneven texture, being useful only for grinding purposes. Later strippings yield the ordinary type of cork which is smooth and even grained and has a combination of lightness, impermeability to liquids, gases, and changes in temperature, and the power to regain its original form after compression not found in any other known substance. It is known technically as *Reproduction* cork, but the cork trade calls it simply *corkwood*. This is less confusing than it might seem, since the wood has no place in the cork trade and is used only in the manufacture of charcoal. The inner bark is used to some extent for a tanning material, being obtained from trees too old to produce good cork and therefore cut down. Removal of the inner bark of course kills the tree.

The cork oak is known to scientists as *Quercus Suber*, which is simply Latin for the same thing. Some botanists believe that there are two species of cork oak and call the tree growing in South-western France and parts of Portugal the Western Cork Oak. As not many botanists, few foresters and no one in the cork business can tell the difference between them, perhaps it is just as well to say that a cork oak is a cork oak and let it go at that. Occasionally



A French forest ranger with some of his stripping crew on a National Forest in Southern France. Most of the cork forests in Europe are privately owned, but the few public ones are generally the better managed.



they grow in rather open stands they look like old apple trees in a neglected orchard. In North Africa they are less spreading, but even there no one uses them for flag poles. The leaves are evergreen, without indentations and only an inch or two long. To most eyes they look very un-oak-like.

The natural home of the tree is about the Western Mediterranean and adjacent coasts of the Atlantic in both Europe and Africa. In ancient times it seems to have occurred about the Eastern Mediterranean, but now it is not found, at least commercially, east of the west coast of Italy. The most extensive forests are along the Algerian and Tunisian coasts of North Africa in

a more or less continuous belt some 400 miles long. The next largest area is in central Portugal, which country is the world's largest cork producer. Morocco comes next in area of forest. Since it has only recently been opened, its production will increase. Spain, although second in production, is fourth in area. Her forests are in two



Transportation—don't be too compassionate, for the load the animals are carrying is not nearly as heavy as it looks.



Sicily—there is not much cork there, but in hunting it one sees Greek temples, Norman castles, active volcanoes and meets peasants who say "me lika New York—live Brooklyn five-year."



A Moroccan cork forest. These forests are just now being opened to exploitation. The natives have long used cork in their households but did not exploit it commercially.



A cork-stripping camp in Portugal. Note the different colors of the trunks. They run through a whole series of color changes after stripping and finally revert to the ashen gray of the original bark.

distinct regions. The largest is in Southern Spain and its cork trade centers in Seville, city of *senoritas* and *siestas*. The other is in Catalonia, north of Barcelona, where Spanish revolutions usually start. Small cork forests occur in Southern and Southwestern France, Italy, Sicily, Sardinia and Corsica, but their production is comparatively insignificant.

We are wont to associate forests with new and wild countries. Parts of the cork countries are wild, but from the historic point of view they are so old as to seem timeless. In exploring them one runs the whole gamut of human history. At the edge of the cork region of Southwestern France lie the prehistoric caves of the Dordogne, where the men of the old Stone Age left us contemporary drawings of the mastodon. Probably there were no cork trees there then, but if there were doubtless the inhabitants used pieces of bark for drinking cups and simple domestic utensils, as is still done by the wild tribes of the Riff Mountains in Morocco.

In the cork regions one is always stumbling on history in unexpected places. In Catalonia I crossed the pass into France half a dozen times intent only on cork trees along the way and frontier formalities at the summit till, one day chancing to glance at a local history, I learned that Hannibal with his elephants had passed the same way. Probably the cork trees did not particularly interest the hosts of Carthage, since they grew on the hills surrounding ancient Carthage itself.

Modern Tunis is not far away and is a hot place in summer, but the ride on an electric train past the city of Hannibal to a bathing beach was a great relief after a day of interviews in the office of the Tunisian Forest Service. Here the French admirably manage the Tunisian forests in the name of the Arab Bey who is content with his revenues and his harem. Algiers with its memories of the Wars of the Barbary Pirates is the center of the French administration of the Algerian forests.

In Sicily I started one morning at daybreak to visit the

isolated cork stands of the western end of the Island. The hotel failed utterly in the matter of breakfast—even a Continental breakfast. Without it four men—the writer, an interpreter, a cork dealer and a chauffeur—were not pleased with life or each other. The temperature rose but not their spirits. Suddenly there were cork trees in sight but I did not look at them. On a nearby hill, stark and alone among the sere brown fields, stood a perfect Greek temple—Segesta. I had heard of it but had not associated it with cork.

Along the French Riviera is an excellent place to study cork and history, modern as well as ancient. To be sure, its forests are small and its cork not always the best, but it is a cork manufacturing center of importance. Near St. Raphael, with its ultra modern pleasure seekers making social and sartorial history, lies Frejus, a sleepy town with Roman walls. Here Caesar made his base when he divided Gaul into three parts and added them all to Rome. It is now a French forestry headquarters.

Spain and Portugal, where lie the best known cork forests, have them mixed with large doses of history. One day we drove along the Spanish coast past Cape Trafalgar and stopped to visit a small cork stand on its shores. In North Portugal we passed and repassed the battlefields where the Iron Duke began to make his reputation and Bonaparte to lose his.

North of Gibraltar lies a wild roadless stretch of mountain forest, part of old Moorish Granada. This we explored on horsback, passing through primitive villages that seemed not to have changed since the Moors left—and would not if they returned. Perhaps they will, for at Xauen in Spanish Morocco we were intrigued with the tale that the Moors who founded it were refugees from Granada and still guarded the keys to their old homes there. Given a thousand years, all things are possible in these timeless lands.

It is perhaps in French Morocco that significant ancient
(Continuing on page 140)



In Southern Spain—here the cork forests look for all the world like old orchards, except that the trees are not planted and so not regularly spaced. They take similar form in Portugal.



This is a well-developed Algerian cork forest. Compare this type with the very different form found in Spain. The cork forests of Algeria-Tunisia are the largest in the world but those in Portugal produce the most.



A wide fire line in Algeria. The cork forests in this part of North Africa have an understory of dense underbrush and the fire risk is high. The lines are sometimes built as much as 300 feet wide, with a central strip cleared of all vegetation.

SAP, SUGAR AND SHEEPSKINS

By MARY CARPENTER KELLEY



Maine Development Commission

A Maine "sap-orchard" in the fall, when the leaves are a glory of scarlet and gold.

TO the New England farmer there is no music so sweet as the combination of woodwind and kettle-drum when maple sap is running. The drip and tinkle of the drops of colorless sap flowing slowly from the hearts of the maples into buckets set to gather it mingle with the sighing of the wind through the trees. In its dreamy monotony the farmer feels the stir of spring and forgets the long hours of gathering and boiling-down that lie ahead of him before he can sugar-off and invite his neighbors to the sheepskin party.

If you do not know what a sheepskin party is perhaps you will be interested in Corporal John Fenderson and how he used to sugar-off a hundred and fifty years ago. Corporal John lived in Pepperellborough, a little town on the Saco River, in Maine, now

called Biddeford. When the Revolutionary War broke out he enlisted in the Continental Army, receiving his discharge after six years of service. But he could not content himself

to settle down in Pepperellborough after that, so he took a wife and the two of them ventured on horseback to the northern part of the county. They got as far as East Parsonsfield, where the hills were rugged and picturesque and where rocky pastures were dotted with great sugar-maples. To the north they could see the blue foothills and the snowy peaks of the White Mountains. The slopes of Mt. Randall were thickly wooded with pine, and a little stream to turn the wheels of a saw-mill and a grist-mill cut its way through. So Corporal John ventured no farther. Here was the country he wanted. He took up a farm and re-



Gathering sap—Jose Fenderson, who is the great-great-great grandson of Corporal John Fenderson, who settled a century and a half ago in the heart of the sugar country in York County, Maine, and whose orchard is a going concern today.

mained on it for the rest of his days. On it his great-great-grandson still lives.

Corporal John immediately realized the value of his sap-orchard, and every spring, around the last of March or the first of April, he tapped the trees and set his buckets. Then he would get the boiling-place fixed and the hogsheads cleaned. They were busy days. The sap was running!

It was the Indian who first learned that the maple sap could be boiled down to produce a delicious sugar. In 1753 the Rev. Samuel Hopkins wrote to friends: "The Indians make their sugar of the sap of maple trees which they extract by cutting the tree on one side in such form that the sap will naturally gather into a small channel at the bottom of the hole where they have fixed into the tree a small chip six or eight inches long which carries the sap into a vessel set to receive it. Thus they tap a number of trees. When the vessels are full they gather the sap and boil it to such a degree of consistency as to make sugar. After it is boiled they take it off the fire and stir it until cold, which is their way of graining it. The sugar is very good, of an agreeable taste and esteemed the most wholesome of any. It might doubtless be made in great plenty and, I cannot but think, to the great profit of the undertakers."

The implements for sugar-making in Corporal John's day were very primitive. His spouts were spiles of sumach or alder with the pith removed, and his buckets were not buckets at all but deep trays made by splitting lengths of basswood and hollowing them out.

Some years later, perhaps in his son's time, crude wooden



A. C. McIntyre

Part of a pile of about 2,200 wooden buckets that were made by hand and have been in constant use for about seventy-five years.

sap-buckets made by the Shakers were much in vogue. These were hand-made, wider at the bottom than at the top so as not to tip over easily, and had flat wooden bails attached to projecting ears, with little pegs whittled out with the jack-knife. Once in a while nowadays one may find such a bucket in an antique shop at a price that its maker would have deemed a little fortune.

After the trees were bored and the buckets set the next thing was to prepare the boiling-place. The sugar-house in Corporal John's generation had not been thought of and the boiling was done in a row of great cauldrons suspended from a stout pole. This pole was supported at either end by a forked stick, perhaps the trunk of a small maple cut where it was beginning to branch. Two big logs were rolled up to the row of kettles and in the space between them a rousing fire was built—a fire which was never allowed to go out until the end of the season.

The sap was gathered into a barrel for hauling on a two-wheeled ox-cart or was brought down to the boiling-place by Corporal John and his hired man in buckets suspended from a sap-yoke. As it boiled and thickened in the first kettle it was dipped into the next kettle and so on until five or more were full of sap or syrup in various degrees of thickness. How white the sweet sticky steam appeared as it would rise among the overhanging maples! And how the flames would lick the sides of the big iron kettles full of seething syrup when Corporal John threw on fresh fuel!

At times they used to stay down in the sap-orchard all night, and then breakfast would be served over the fire. They would boil eggs in the sap, make a pot of coffee with sap instead of water, and frizzle strips of bacon and rounds of sausage over the coals. Sometimes for dinner they would bake potatoes in the ashes and eat them with salt pork broiled over the coals. And Mrs. Corporal John would bring down from the cabin a pail of crisp doughnuts which they would have for dessert with maple sugar cooled on plates of snow.

And so the gathering of the sap and the boiling down went on until at last the run was over and the last two kettles were full of heavy golden syrup. Then it was time to announce the sheepskin party. Friends (Continuing on page 144)



In the one hundred and fifty-year-old "sap-orchard" established by Corporal Fenderson, when the sap is running.

A GOOD DEED

"How far that little candle throws his beams!
So shines a good deed in a naughty world."

AND if it were the great poet who was paying tribute to this particular "good deed" today, well might he muse on the power of its beams, for they have penetrated far, and into unlit ways—where the warm sun seldom shines, and hope is dim. It is a very short story, but one which each member of The American Forestry Association will take pride and satisfaction in hearing, for it was one of their own group who lighted the candle—Mrs. Anna B. Scherer, of Connecticut.

Knowing, from the reaction from a few scattered subscriptions, that there are few places where the magazine is more enjoyed and appreciated than by shut-ins—the ill and unfortunate—inmates of prisons and corrective institutions, and of veterans' hospitals, it was the desire of the Association to make it available to them. The value of instilling an increasing love of nature and the things of the outdoors in men who are serving terms in prison is boundless, and a powerful aid in their rehabilitation. And the eager interest and pleasure of the boys lying ill in the veterans' hospitals in such things—in which many of them may never again actively participate—is too well known to need enlargement here. It was felt that there were few finer ways in which the magazine could be used, dealing as it does with trees, the whole outdoors and the inspiring influence of wood, mountain and stream. It inevitably brings to such people the breath of nature to freshen and shorten the hours of confinement. And there is always the chance that it may bring to many an entirely new outlook on life—a new vision of the finer things of life—perhaps even reshaping their activities when they are once more returned to their places in the outer world.

Learning of this effort and desire on the part of the Association, Mrs. Scherer volunteered to underwrite it as far as she possibly could, and as a result of her splendid generosity nearly five hundred individual memberships have recently been placed.

In thirty-seven veterans' hospitals all over the land the

magazine is now watched for and eagerly read. The major prisons have been supplied. A number go to hospitals for little ones who are crippled or incurably ill.

That the magazine is appreciated by the recipients is indicated by the letters of acknowledgment which have poured in—not only from the officials in charge of the various institutions, but from the inmates themselves. One would hardly expect men—and women—in prison under life sentence, to have and express voluntarily such hungry and active interest in trees and the work of forest conservation as these touching letters would indicate. Warden Lewis E. Lawes, of Sing Sing Prison, who is so well known for his humanitarian work and viewpoint, pays a splendid tribute to the trees in his

letter of acknowledgment:

"There is a softening influence and contentment in the beauty of the wilderness, and the noble efforts of your Association to preserve it should have the enthusiastic support and cooperation of every citizen."

And a poignant line comes from the editor of a little paper published by the inmates of Ohio State Reformatory—himself an inmate—who writes:

"The hours die hard behind bars—but not so hard with a good magazine like AMERICAN FORESTS at hand."

A high note of tenderness lies in the letter from a tiny child, who,

hopelessly crippled in a children's hospital, nevertheless writes happily that she watches for each number of the magazine because she loves the pictures of the animals and of the flowers and trees, and the woods like she "used to play in."

And one might go on for pages in like vein. But these quotations illustrate the sincere interest and general feeling of gratitude prevailing. In paying tribute to Mrs. Scherer, The American Forestry Association is eager to acquaint its whole membership with the fine thing she has done. The editors share her happiness in the knowledge that it has added immeasurably to the lives of thousands of unfortunate persons. Such a contribution not only makes for immediate pleasure and benefit to those who direly need it, but it is a very practical and inspiring demonstration of how the humanitarian influence of the forest can be made to sustain the higher standards of American life.



Mrs. Anna B. Scherer—humanitarian—in her garden at her home in Connecticut.



EDITORIAL

Youth and the Forest

A QUARTER of a million American youths seeking work are adrift and homeless in the United States bumming their way from city to city and from state to state, living in jungle camps and becoming hardened by the hunger, contaminations and environment of the hobo trail. This sums up information given last month at a Senate hearing on unemployment relief. The witnesses included a long list of men and women who have studied conditions first hand.

The nation's greatest asset is its youth. They are the source from which flows the country's continuing character, its spiritual and economic leadership. That so large a part of America's potential manhood during its vital years of character building is forced to lead a life that saps its stamina, destroys its self-respect and blackens its outlook upon life is the most serious aspect of unemployment today.

The problem is in large part national. If the nation values character, it will act promptly and speedily. The Government can if it so wills. It has only to release the opportunities which the National Forests hold for providing work in almost every state in the Union, and particularly in the west where the transient youth situation is most acute. Secretary

Hyde has recently stated that the National Forests are vast reservoirs of potential and constructive work. Projects of a character normally calling for appropriations could employ 100,000 men for one year, less important projects an additional 40,000 men yearly. Here is work spread through thirty-eight states and largely self-liquidating in character to keep half a million men busy this summer. A hundred million dollars, according to the Secretary's estimate, would set the work in motion.

The drifting youth as a rule, we are told, shuns charity. He does not want to be the ward of a government dole. He wants to maintain his honor and self-respect by work. It is not to be expected that all would or could work in the woods but forest camps operating in virtually every section of the country would absorb enough of the able bodied to make it possible for the states to deal with the remainder. With funds, there need be no delay in this program. The National Forest Service could have the forest work camps ready for operation when winter breaks into spring, and instead of hanging its head in the slums and railroad yards of the cities, American youth could lift its face to the trees.

The Pisgah Hunt

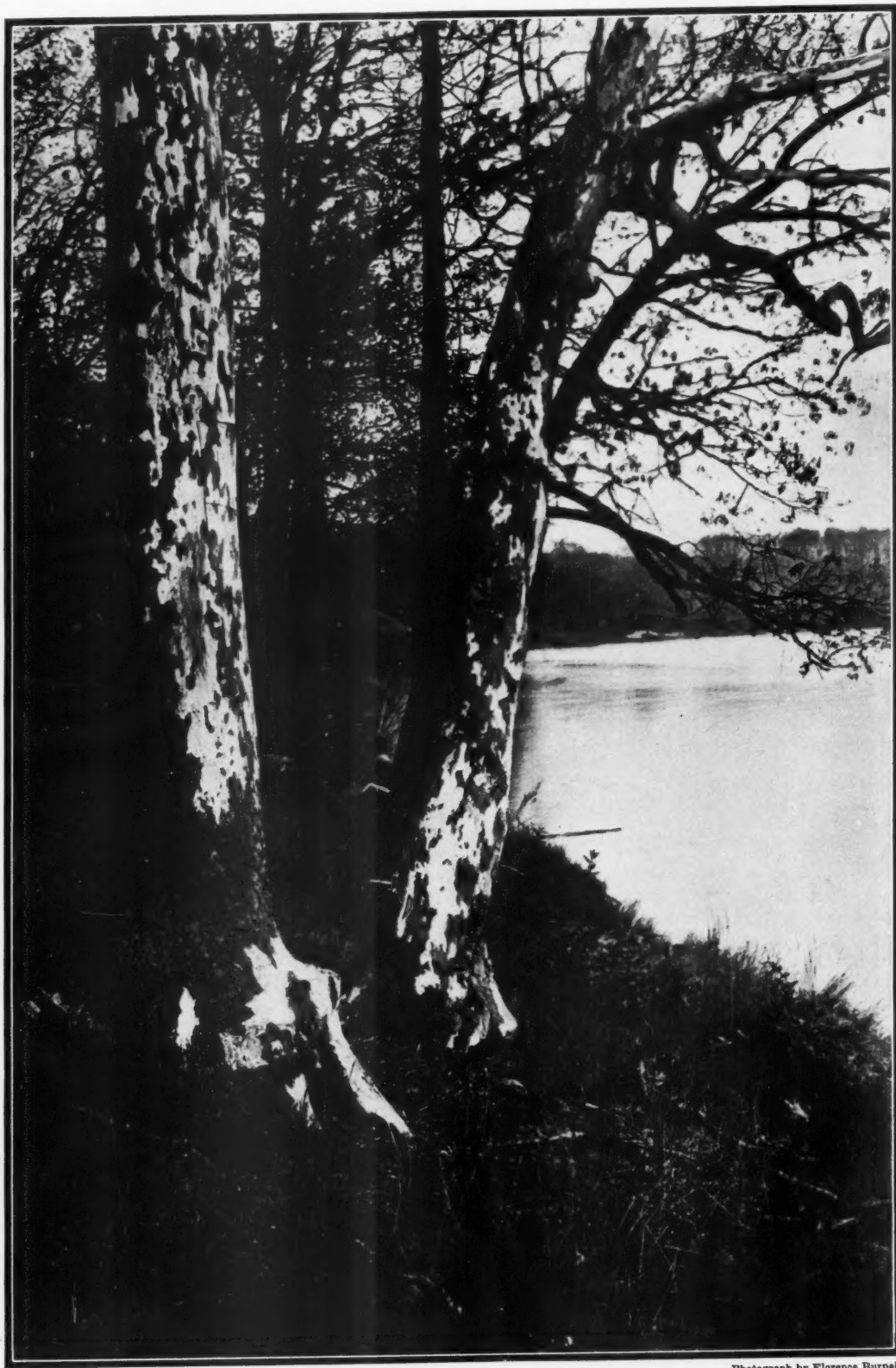
Elsewhere in this issue appears an article—"Regulated Hunting on the Pisgah"—which describes an experiment highly significant of constructive trends in wild life conservation. Its purpose was to find an answer, if possible, to the increasingly perplexing problem of adjusting the wild life population of a given region to its natural food supply and thereby to forestall eventual shortage of food and depletion of animals by starvation and disease.

In this instance the animals were white-tail deer which had had complete sanctuary on some 100,000 acres of mountain land within the Pisgah National Forest during the past fifteen years. The deer having increased by natural propagation to such numbers that evidences of impending food shortage were becoming clearly apparent, the Forest Service decided that if the deer herd is to be perpetuated in safe and healthy numbers some plan must be adopted to remove the yearly surplus. This called for a determination of the number of deer the range could safely support and the method best adapted for removing the yearly excess. Trapping of live deer was tried and found ineffective. It was then decided to explore the possibilities of regulated hunting. An area from which it was determined 250 deer could be removed with benefit to those remaining was designated and a rigidly controlled hunt extending through about three weeks was conducted.

The Pisgah experiment represents a progressive step in wild life management. It may not be exactly the right method

in detail, but it is at least courageous recognition of conservation's two-fold responsibility in dealing with wild life: first, to increase the supply through proper safeguards of protection and propagation and, second, to control surplus numbers when they reach a point that threatens the food supply and the welfare of the animals as a whole. The latter calls for unsentimental facing of the biological fact that neither wild animals nor domesticated animals can be increased *ad infinitum* within a given area without a day of reckoning. That day dawns when the animal population begins to exceed the limits of its natural food supply.

Unfortunately this fact is none too well accepted in the conservation field. There are those honest and sincere in their beliefs who hold that the ultimate in wild life conservation is complete and perpetual sanctuary, that any hunting or killing of creatures of the wild is high treason, and that the only good conservationists are those who subscribe to these principles. These well meaning people will probably see in the Pisgah experiment only the number of deer killed. They have only to study with open mind, however, some of the conditions which have developed elsewhere in recent years, such as the over-population of the deer on the Kaibab Plateau in Arizona, to have brought home to them that conservation which fails to balance the wild life population to its available supply of food and environment ultimately defeats its own ends and creates conditions of starvation, disease and depletion that are infinitely more inhuman than those incident to regulated hunting.



"The Sycamores"

Photograph by Florence Burnell

THROUGH THE LENS



"Winter Landscape"

Photograph by Glenn W. Murray

AMATEUR PHOTOGRAPHS WIN AWARDS

TWO more prize winning photographs are announced this month by the editors of AMERICAN FORESTS. They are "Winter Landscape" by Glenn W. Murray, 1617 East Platte Avenue, Colorado Springs, Colorado, and "The Sycamores," by Florence Burnell, Hudson, Iowa. Each has received \$5 for his winning picture.

The first of the prize winning photographs were announced in the February issue of the magazine, and future awards will be made during April, May and June. These winning pictures, together with 1,300 others, were submitted in 1932 by the readers of "Through the Lens" in an effort to determine the benefits received by amateur photographers throughout the country who were following the twenty-four short lessons in outdoor photography published during the past two years.

Mr. Murray, a camera enthusiast, submitted a number of splendid studies, all showing thoughtful and careful work. The above picture received the prize award chiefly because of composition and light effects. It was made by a hand camera and the original from which the above reproduction was made was four inches long and two and three-fourths inches wide.

Miss Burnell's subject shows real achievement in the art

of "close-up" photography. She was not reaching so much for effect as she was for a definite portrayal of individual tree beauty. This she succeeded in doing in perfect composition. The unusual character of the tree immediately impresses, but its environment is not lost. The original was five inches long and three inches wide, trimmed slightly upper and lower for reproduction.

Because the short lessons in outdoor photography will be discontinued during the publication of the prize winning photographs, a new service to readers is inaugurated on page 135 of this issue. "Camera Queries" will attempt to solve your particular problem, large or small, as clearly and as briefly as possible. If it fails, a letter to the Editor will bring you more detailed information. It will also endeavor to answer questions relating to outdoor photography—things of historic or artistic significance. Just send in your question addressed to "Camera Queries" and it will be answered through the medium of the magazine as soon as possible. If immediate reply is desired by letter, sufficient postage should be enclosed.

But remember, having your questions answered will not produce good pictures. Successful photography is in application of what we know, what others tell us and what our sense of beauty dictates.

Conservation Leaders in Congress



Senator Henry W. Keyes, of New Hampshire, a Vigorous Tree Planter, and a Strong Factor in Building the National Forests of the East

By PHILIP W. AYRES

HENRY W. KEYES, War Governor of New Hampshire and for fourteen years a United States Senator, inherited the habit of tree planting. His father kept a large general store in Newbury, Vermont, in the pioneer days, when freight had to be hauled many miles over bad roads from Concord or from White River Junction. He became a railway builder, constructing the road from White River Junction, Vermont, to Sherbrooke, Canada, connecting with the Grand Trunk line; and later became president of the Santa Fe System. He bought a farm in New Hampshire, the farm that is now the charming estate of Senator Keyes, where he began his plantations of pine trees.

Senator Keyes was born in Vermont, one mile from his present home in New Hampshire, a river separating the two estates. Before his father's death, when the lad was eight years old, he helped plant pine trees on the New Hampshire farm. The young trees covered a wide sand waste, where, in the course of years, a beautiful forest now has restored the soil fertility. He continued to plant trees, both before and after his years at Harvard University. He took great interest in the New Hampshire farm; also in the Kansas farms that had been acquired by members of his family. On the New Hampshire farm he imported sixty pure-bred Holstein cattle and on five occasions pure-bred sheep. He continued to plant pine trees and as his three sons grew into young manhood, they assisted. The result is that the generous estate abounds in beautiful forest in various stages of development. It is named "Pine Grove Farm."

It is not surprising that when Senator Keyes was elected to the New Hampshire House of Representatives in 1891, at the age of twenty-eight, he was interested both in agriculture and forestry, or that a few years later, in the State Senate, he became chairman of the first legislative committee on forestry, which was not a popular cause in those days. In the House, in the Senate, and afterwards as Governor, he gave particular attention to these subjects. Nor is it surprising that when elected to the United States Senate in 1918, conservation measures for the nation at large became a permanent objective.

It is fitting that the University of New Hampshire granted

to Senator Keyes the honorary degrees of B.S. and LL.D., and that Dartmouth conferred upon him an A.M. degree when he became Governor.

In the United States Senate, Calvin Coolidge, then presiding over the Senate as Vice-President, appointed Senator Keyes a member of the National Forest Reservation Commission, charged with building up National Forests in many states east of the Mississippi River, particularly in the northern and southern Appalachian mountains. This Commission has expended during the years from 1912 to 1932, a little more than \$25,000,000—about the cost of one battleship—for which nearly 5,000,000 acres have been acquired in a dozen eastern states, at a purchase price of approximately \$4.49 an acre, plus an administration cost of eighty-two cents an acre. The Commission consists of three members of the Cabinet—the Secretaries of War, Agriculture and Interior—with two Senators, appointed by the President of the Senate, and two Representatives, appointed by the Speaker of the House. It is accomplishing a great work, fraught with benefit to the future of the nation.

Naturally Senator Keyes has been interested in the development of the White Mountain National Forest, in New Hampshire and Maine, and in the new Green Mountain National Forest in Vermont, though never at the cost of forest development elsewhere. He is personally familiar with the purchase made in the White Mountains, now 535,000 acres, or 836 square miles. After purchase, these forests are administered by the United States Forest Service, of which the Senator has become a staunch friend. The White Mountain Forest has become fully self-supporting and returns to the State of New Hampshire annually a considerable sum in lieu of taxes. This forest alone had upwards of two million visitors last year. It is said that 11,000 tents were set up in the summer of 1932 in the camp grounds maintained for that purpose, where pure water and proper sanitary arrangements, with fireplaces, firewood and adequate policing are maintained.

In the National Forests the roadsides and trails are carefully protected. When new roads are constructed only the necessary trees are cut. In the White Mountain Forest more than 70,000 acres have been set aside to protect the natural

beauty of the region surrounding notable scenic features, such as Glen Ellis Falls, Huntington Ravine and Eagle Cliff in Franconia Notch. Two extensive wilderness areas, one around the beautiful Greeley ponds in Waterville, have been set up never to be disturbed, to be maintained as scientific examples of primeval woods. Other extensive areas on the high mountain slopes will never be invaded by axmen, because they are more valuable for protection of waterflow from the White Mountain region than for timber. All of the great rivers of New England, except the Penobscot, have their rise in the White Mountains, and they affect directly vast manufacturing enterprises in all of the states of New England except Rhode Island.

The influence of Senator Keyes has been exerted during many years toward elimination of forest insects and diseases, such as the brown tail and gypsy moths and the white pine blister rust. As a member of the Senate Committee on Appropriations, no forestry item escapes his consideration, whether it has to do with the 161,000,000 acres that comprise the National Forests of this country, or with the forest policies that assist private owners in the management and reforestation of their woodlands. He has been ever watchful of the general agricultural interests of the country, of which the forests are a part, and modestly gives his occupation in the Congressional Directory as "farmer."

It follows naturally that Senator Keyes should be greatly interested during his long residence in Washington in the development, not only of the Capitol grounds, of whose management he is now Senate Chairman, but also of the extension of forest and park areas in the District of Columbia and its immediate vicinity. Wisely, conservatively, as Congress provides means for these endeavors, Senator Keyes is here, as in the National Forest Reservation Commission, a guarantor



C. T. Bodwell

Senator Keyes has been a friend of the trees since he was eight years old, when as a little lad he helped set out these pine plantations on his father's estate in New Hampshire.

of prudent expenditure. He counts it his obligation to see that for every dollar appropriated a full dollar's worth of service is rendered in the purchase and beautification of these District roadways and parks. How far-reaching is the influence of one who quietly goes about his work without ever seeking advertisement! His home people love him, and at his last election returned him to the Senate by an almost unanimous vote, without opposition. In their judgment he perform effectively the duties required of his high office.

Space forbids an account of the excitements and discouragements in carrying through the House and the Senate the several measures in which Mr. Keyes has been interested. One example only: When, in 1923, after the flush of the war was over and the nation was paying off its debts, it was

proposed that no appropriation should be made to carry forward further purchase of National Forest land by the National Forest Reservation Commission. Congress was inclined to forget that the preservation of the country's natural resources is fundamental and that in good times and bad times alike it is necessary to protect them. The Agricultural Committee in the House was not interested; consequently the House took no action. As the end of the session approached, the Senate committee made an adverse report. It was then that Senator Keyes followed a very unusual course. He carried the matter to the floor of the Senate, won an appropriation of \$450,000 to continue the purchases in ten states, and secured the necessary ratification by the House of Representatives. This was a rarely accomplished piece of legislation, for seldom does the Senate reverse a committee report. It could not have been brought about except by one whose quiet good judgment commands the respect of his colleagues.



C. T. Bodwell

The Senator's love of trees was a natural heritage, for his father before him was a tree planter. This fine grove is only one of many he planted.



THE BOOK BUG

WHEN he should have been killing mosquitoes down at the swimming hole or brushing away yellow jackets from a campfire meal, Brooks Warner, son of the Chief Park Ranger, was permitting the book bug to attack him so viciously that he became immune to all else in the world save reading.

His mother called him Brooks—a family name—but the boys dubbed him "Books," not exactly because he wore horn-rimmed glasses and was slightly near-sighted, but because no matter where they went Brooks was sooner or later to disappear somewhere with a book.

"Oh, a day like this," his father would say with a look of disgust, "to be indoors reading!" Then taking the book away from his son's reluctant hands he would order him outside.

"He's ruining his eyes and health, too," Chief Warner told Brooks' mother. "Instead of a robust boy of thirteen, he's a regular lily—not a bit of color in his face."

Brooks, returning for something, happened to overhear the conversation.

"I'll not have you calling Brooks a lily," his mother defended him. "Why, there's not a boy in the Park that gets the grades at school Brooks does, and if he likes to read, I'm not going to discourage him."

"Those detective and adventure stories will never help him any, I'll wager that. They just put a lot of foolish notions in his head."

"Lily," thought Brooks, deeply hurt. "Dad thinks I'm the lily type. Why there's nothing I'm really afraid of."

From that day on for the next five or six weeks Brooks did his best to demonstrate to his father that he was decidedly for the out-of-doors. He went on hikes that tested his endurance, he swam when the river water was too cold for most folks and played tennis whenever he got a chance. The

Although he was the son of a Chief Park Ranger, Brooks Warner lived in books. He shunned the adventurous outdoor life of his companions until one day he came face to face with a fire and a bandit—then things began to happen and the boy had the greatest thrill of his life.

Brooks Warner is not his real name, of course, but the incidents related in this story are true facts. It is contributed by Elizabeth Hopf Godfrey, wife of Ranger William C. Godfrey, of the Yosemite National Park.

favorable comments and glances of approval from his father on this decided change were sufficient reward. Then Brooks was taken ill, the 'flu, they said it was, and during convalescence the book

bug got him worse than before. Everybody in the Park brought him books to read and Ranger Billy brought over enough detective story magazines to last him the rest of his life.

Then one night the light in Brooks' room burned until nearly daybreak. The next day was mid-term examinations. Brooks, with a headache and his mind still absorbed in the novel he had just finished, struggled lazily over the questions. The result was a report that was a disgrace to the high standards he had previously set for himself.

"There's to be no more reading, Brooks, of outside matter," his father told him emphatically. "You know as well as I do that the reason you fell down in your studies was because you lay awake until all hours of the night reading those foolish stories that have nothing whatever to do with your school work. Now promise me that you won't disobey me by reading behind my back?"

Although he was counting the days until the next issue of the detective magazine, that he might finish a serial, Brooks was deeply disturbed.

"I'm sorry about my marks, dad," he said with a remorseful look, "and I promise."

To remove all temptation, Chief Warner then proceeded to take every book and magazine from the boy's room and store them away in the closet.

It was the following Saturday afternoon in early October when the fire season was still hazardous that Brooks, with Hal Snyder and several other companions, went fishing. As they walked along with their poles and salmon eggs, Brooks

related the latest excitement to his companions. "There's a real mail robber in the Park, fellows. He escaped from San Quentin last week. Dad said to keep it under the hat, 'cause he didn't want to get everybody excited, but the rangers are all laying for him at the checking stations. Imagine the goof!—hitting for a National Park. It's just like walking into a trap."

"I heard my dad talking about it, too," spoke up Hal Snyder. "Say, what would you do now if you met a bird like that?"

"He won't be playing round any fishing holes," Brooks prophesied. "I'd sure like to level a gun on him. I'd scare him so bad he'd wish he'd stayed in jail."

"Say, you'd run so fast he couldn't see you for dust."

"Is that so?" Brooks came back. "Well, I'd—"

"Brooks! Oh, Brooks!" a voice cut in. Looking around the boys saw Ranger Billy, one of the old-timers, repairing a broken sign at one of the Park crossroads.

"Here's the latest copy of your detective magazines," he shouted. "Just got it over at the store and thought you'd like to finish that serial."

Not until Brooks had placed the magazine in his bag and thrown it back over his shoulder, did he remember his promise. His brown eyes became slightly wistful. In this issue would be brought to light the real villain of the exciting tale.

"Let's try this place," Hal Snyder suggested as they reached their favorite fishing haunt. "And remember, the fish aren't deaf."

For a few moments hooks were being bated with salmon eggs, then the fishing began. The sun sparkled on the water and glistened in the golden coloring of the alders. Across the river were shadowy pools of deep purple hanging in the crevices of the great granite cliffs. There were patches of flaming dogwood and a blue, cloudless sky.

Brooks was really too absorbed in the overwhelming beauty about him to be really interested in the fish. Sky-gazing, he lost his footing and slipped, not just down the bank, but right into the cool deep water.

A few splashes and strokes and a moment later his companions were dragging him out—minus cap and fishing pole.

"We'll make you a little fire so your clothes can get dry," Hal Snyder suggested.

"We can't do that," Brooks protested feebly knocking his knees together. "It's against the rules to start fires without a permit."

"Nothing can happen with all of us here," Hal told him.

In a few minutes Brooks was sitting before a small fire with his knees up in front of him, with only Hal's sweater about his shoulders. On a bush beside him were his clothes—spread out to dry.

The boys returned to their fishing and Brooks very gingerly got out the magazine, not to read it, of course, but simply to glance through its enticing pages. There had been no promise not to look through a magazine. He really hadn't intended to read it at all, but the book bug made him fairly itch all over. It was like sitting a hungry man down to a good meal and telling him not to eat. Scarcely knowing it, Brooks was lost in the story.

All of a sudden he looked up. For fifty feet in front of him there was a creeping flame, devouring the dry, parched grass.

"Hal! Jim! Don!" he shouted in excitement. "The meadow's on fire!"

Three excited boys were at his side.

"Run to Bridal Veil Station and phone the rangers, Jim! The rest of us can beat it out with our clothes!"

Grabbing his wet corduroys, and without even putting on his shoes, Brooks leaped in front of the fire line.

"You get her over there!" he said to Hal, "you down there, Don, and I'll take the middle!"

In less than ten minutes the boys had the fire out.

"Brooks, your feet are bleeding!" Hal exclaimed.

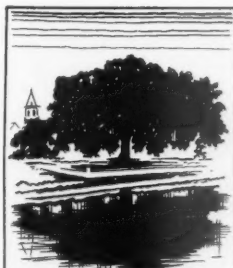
In his underclothes, more black than white, his face perspiring and his feet covered with blood, there was never a more dilapidated looking person than Brooks Warner.

The fire truck with several rangers and Chief Warner came thundering down the road to the scene of alarm. Brooks, ever mindful of his personal appearance, retreated behind the bushes.

"All out, Chief," Brooks heard (Continuing on page 141)

FAMOUS TREES EVERY BOY AND GIRL SHOULD KNOW

No. 5---THE EVANGELINE OAK



ON THE SHORE OF BAYOU TACHE, IN ST. MARTINVILLE, LOUISIANA, STANDS ONE OF AMERICA'S MOST FAMOUS TREES—THE EVANGELINE OAK. IT MARKS THE SPOT WHERE THE ACADIANS, DRIVEN FROM NOVA SCOTIA, LANDED AT WHAT WAS THEN POSTE DES ATTAKAPAS.



LATE IN THE SEVENTEENTH CENTURY, ENGLAND WAS DOMINATING THE GREAT LAND TO THE FAR NORTH FROM THEIR HOMES IN ACADIE, NOVA SCOTIA. FRENCH FAMILIES, OFTEN DRIVEN SOUTH, MANY SETTLED IN MARYLAND, BUT MORE THAN SIX HUNDRED MADE THEIR WAY TO LOUISIANA AND POSTE DE ATTAKAPAS.



MEANWHILE, AMONG THE EXILES WHO HAD BEEN DRIVEN INTO MARYLAND, WAS A YOUNG GIRL, EMMELINE LABICHE, THE HEROINE OF LONGFELLOW'S 'EVANGELINE'. HER LOVER, LOUIS ARCENEAUX, HAD BEEN SENT TO LOUISIANA. THEY SEEMED HOPELESSLY LOST TO EACH OTHER.

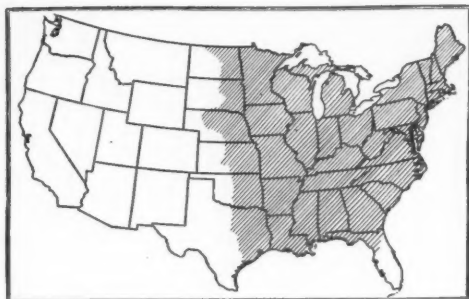


EMMELINE, HOWEVER, COULD NOT REST. SHE SET OUT TO SEEK HER LOVER. ACCORDING TO LEGEND, SHE MADE THE ARDUOUS JOURNEY TO LOUISIANA AND IT WAS BENEATH THE LARGE LIVE OAK NEAR THE BOAT LANDING THAT EMMELINE AND LOUIS MET—THE SCENE PICTURED BY LONGFELLOW IN THE BEAUTIFUL WORDS OF 'EVANGELINE'—'O GABRIEL! O MY BELOVED!—AH! HOW OFTEN BENEATH THIS OAK, RETURNING FROM LABOR, THOU HAST LAIN DOWN TO REST, AND TO DREAM OF ME IN THY SLUMBERS!'

SUGAR MAPLE-- *Acer Saccharum*, (Marshall)



The symmetrically rounded head of an open grown sugar maple tree.



Natural range of sugar maple within the United States.

SUGAR maple grows naturally in every state east of the Great Plains but most vigorously in the northeast and in the higher elevations of the southern Appalachian mountains. The name, sugar maple, refers to the spring crop of sugar and syrup that is boiled from its sweet sap. In autumn the leaves change from green to brilliant reds and yellows, and are an outstanding feature of the northern land-



In winter the relatively short stem and skeleton of many branches is revealed.

scape. Open grown maple trees have a short trunk and a compact, globular crown. In the forest the tree lifts a relatively small rounded crown high up on a long trunk, to attain total heights from seventy to 130 feet. Forest grown maples are frequently two or three feet in diameter and have been known to attain five feet.

The smooth silvery bark of young trees becomes darker, more broken and deeply grooved as the tree matures. Frequently conspicuous shreddy flakes are developed.

Distinguishing features include the five lobed leaf, the delicate pointed buds which grow opposite one another the double winged seed or key, and the tendency for all branching to be opposite. Large quantities of fertile seeds mature in the early summer from inconspicuous, long stemmed flowers that appear with the new leaves in April or May. Staminate and pistillate flowers are in separate clusters on the same tree, but occasionally a tree may have flowers of only one sex. *Acer*, the scientific name of the maple family, means hard or sharp. The Romans used maple for making pikes and lances as well as for tables and other furniture. *Saccharum* refers to the sweet sap. Most widely known as sugar maple or hard maple, it is also known as sugar tree and rock maple, while a botanical variation is known as black maple. Nearly a hundred species of maple are distributed over the Northern Hemisphere, of which thirteen are native within the United States. Maple trees and shrubs extend across the equator to the mountains of Java, and reach toward South America in the uplands of Central America. Most of the old world species grow in the valleys of south-eastern Asia.

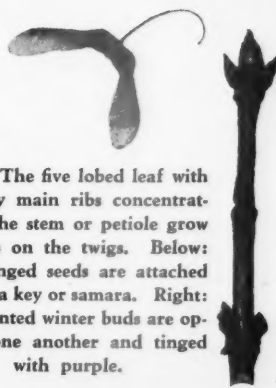
The wood is known to the lumber trade as white maple, and the bulk of maple lumber is of this species. The wide white sapwood may stain to a pale brown if improperly seasoned. The heartwood is light reddish brown, and the luster of each helps distinguish sugar maple from other maple wood. A cubic foot of air-dry maple weighs forty-four pounds. Although lighter than white oak, the wood is stronger and stiffer, and ranks as one of our more valuable hardwoods. In 1930, 601,218,000 board feet were cut. More than half came from Michigan and Wisconsin, with considerable amounts from West Virginia, New York, Pennsylvania, and Vermont. Maple is used for flooring, shoe trees, agricultural implements, musical instruments, furniture and a wide variety of materials which need a strong, firm, close-grained wood able to stay in place and capable of taking a polish. Accidental forms with contorted grain, known as curly maple and bird's eye maple, are prized for cabinet-making.

Maple syrup and sugar are important spring crops on many farms in Vermont, New York, Ohio, Pennsylvania, and Michigan. Ordinarily forty-five to fifty gallons are boiled down to make a gallon of syrup, and fifteen to twenty gallons of sap are secured from most of the trees. The census for 1929 reports the production of 13,285,000 pounds of syrup and sugar valued at \$2,509,000.

Capable of growing under a variety of conditions, it grows especially well on gravelly, slightly alkaline soils. A few plantations have been established for sugar as well as lumber production, but the slow growth does not encourage such an investment. It grows readily from seed and is an important element in the management of many northern forests.

Although not so well adapted to city street conditions as some of the other maples, it is a favorite on suburban streets and country roads. Seedlings and small trees are easily transplanted. It is recommended for street and landscape use in the northern part of its natural range, in western Washington and Oregon and the northwestern counties of California.

None of the many insect and fungus pests are serious enough to discourage planting sugar maple for ornamental purposes. The sugar maple borer kills large limbs and occasionally entire trees by boring under the bark and in the outer sapwood. Similar damage is done by the larva of the leopard moth. The white grub of a twig pruner occasionally mars the trees and litters the ground by cutting off twig ends in the early autumn. Tent caterpillars, white marked tussock

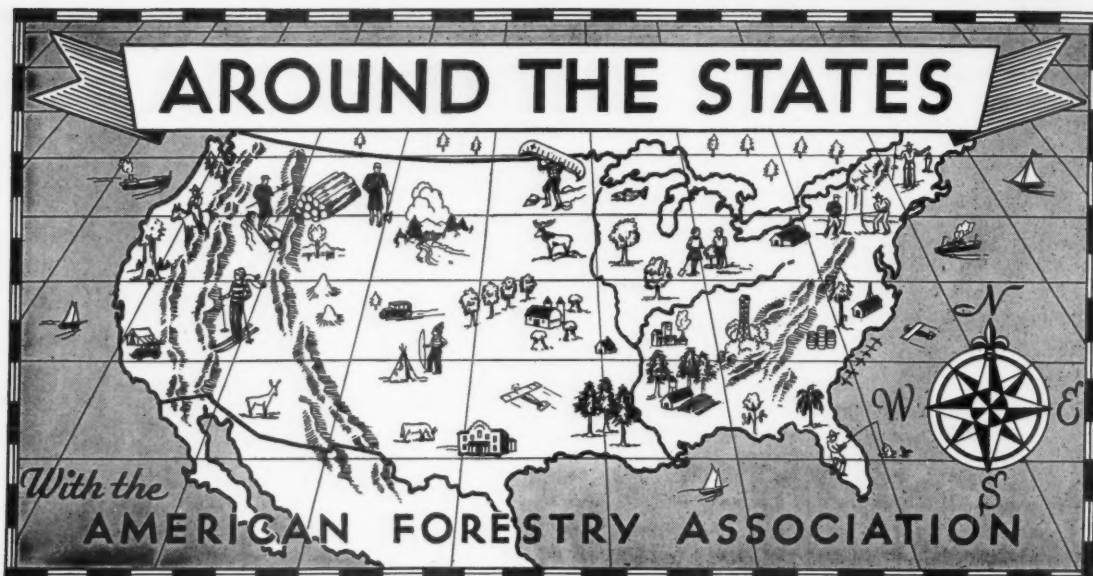


Above: The five lobed leaf with as many main ribs concentrating at the stem or petiole grow in pairs on the twigs. Below: Two winged seeds are attached to form a key or samara. Right: The pointed winter buds are opposite one another and tinged with purple.



The ash gray bark breaks up into hard flinty flakes.

moths and a green-striped maple worm may work on the leaves but seldom consumes all of them. Other insidious insect enemies are the scales which attach themselves to the young tender bark. Borer attacks may be met by pruning and burning the affected parts in the spring, while the leaf eaters and scales can be controlled by spraying.



Tennessee Watershed Is Chosen by Roosevelt to Launch Gigantic Experiment

A gigantic project embracing reforestation, reclamation, waterpower and farm rehabilitation, was announced on February 2 by President-elect Franklin D. Roosevelt, from Warm Springs, Georgia. The watershed of the Tennessee River, involving the states of Tennessee, Virginia, West Virginia, North Carolina, South Carolina and Georgia, and parts of Kentucky, Alabama and Mississippi, was chosen by Mr. Roosevelt for this "most interesting experiment a government has ever undertaken." Designed as the first step toward the reestablishment of American life on a basis that will mean the end of unemployment, the decentralization of industry, and a "people protected by the watchful eye of a government," the Tennessee project, the President-elect estimates, would provide 200,000 jobs. He believes forestry work could be started immediately, employing from 50,000 to 70,000 men in planting trees, cutting fire lines and rehabilitating existing forests generally.

As announced by Mr. Roosevelt, the Tennessee Valley project is to include: Reforestation; creation of flood control basins in the upper valleys, first at Cove Creek in the Clinch River; waterpower development to be available for cities, states and farm homes; reclamation of the fertile bottom lands for agricultural use; elimination of the unprofitable marginal lands from farm pursuits; eventual flood control of the great Mississippi River; and eventual improvement of navigation.

Through the development of flood control basins he estimates the power to be produced at Muscle Shoals can be increased to between two and three million horsepower—enough to electrify every farm, factory and home within the valley. As a result of flood control development, he expects rich bottom-lands to be restored to the profitable use of farmers—land to replace the eliminated and non-profitable marginal acres, which would be put to grow-

ing trees. Government purchase of some of the forest lands and of those marginal areas which would be retired from agriculture is contemplated in the Roosevelt program.

The total drainage area of the Tennessee River is 40,423 square miles. Its headwaters lie in the rough mountainous country of the Cumberland Plateau in Tennessee and Virginia and the rougher Blue Ridge Mountains of eastern Tennessee, North Carolina and

casual scattered pine stands are found. These hardwood forests have been frequently cut over, burned and grazed, lowering the area both in value as forest and watershed.

Most of the forest lands of the Tennessee River Basin are in private ownership, a great portion being held by lumbering, pulp or mining companies. The aggregate area held by small owners, however, amounts to more than one-third of the total.

Because conditions in private lands were so harmful to streamflow, Congress in 1911 authorized the purchase of forest lands at the headwaters of streams and their management as part of the National Forest enterprise. About one million acres have been thus acquired in the Tennessee basin and administered as follows: Cherokee National Forest, 634 square miles; Nantahala National Forest, 377 square miles; Alabama National Forest, 323 square miles; Unaka National Forest, 281 square miles, and Pisgah National Forest, 275 square miles.

In addition, the Federal Government has acquired more than 250,000 acres of forest land in the Great Smoky Mountain National Park.

Altogether the area of Federally-owned lands under management amounts to about two per cent of the drainage area and five per cent of the forest area. The region is susceptible to periods of sudden concentrated rainfall of the "cloudburst" type which has contributed, together with many uses and abuses, to erosion on an accelerated scale. Sheet and gully erosion are evidenced everywhere. Combinations of these two processes are to be found on almost any slope which has been used for agriculture or where forests have been clear cut and repeated fires have followed.

The consequences of soil erosion from the higher, rougher lands are felt in the slow-flowing Tennessee (Continuing on page 133)

HIGHLIGHTS OF THE PROJECT

As announced by Mr. Roosevelt, the Tennessee Valley experiment would include:

1. Reforestation.
2. Creation of flood control basins in the upper valleys, first at Cove Creek in the Clinch River.
3. Waterpower development to be available for cities, states and farm homes.
4. Reclamation of the fertile bottom-land for agricultural use.
5. Elimination of the unprofitable marginal lands from farm pursuits.
6. Eventual flood control of the great Mississippi River.
7. Eventual improvement of navigation.

Reforestation work can be started immediately, the President-elect believes, providing work for from 50,000 to 70,000 men.

The whole project would give work to 200,000 men.

Nine states are involved—Tennessee, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and parts of Kentucky, Alabama and Mississippi.

Georgia, with the Appalachian Valley in between. Elevations range from 700 to 6,000 feet. The central portion of the river flows through lower country consisting of the Highland Rim in Tennessee and the rolling country of northern Alabama. The river is now navigable from its mouth to Knoxville—a distance of 640 miles.

Nearly 23,000 square miles, or fifty-three per cent of the total area, in the Tennessee watershed is classified as forest land. Forests make up seventy-five per cent of the area in the central river region. The forests of the upper Tennessee are largely hardwoods, although oc-

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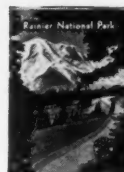
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Forest Range Issue Before House Committee

Reduction of grazing fees on the National Forests for the season of 1933 was given an airing in the House Committee on Agriculture on January 27 and February 1. On the former date Senator Carey of Wyoming and Representatives Eaton and Taylor of Colorado appeared before the Committee in support of their resolutions to require the Secretary of Agriculture to reduce the fees fifty per cent. On January 27 opposition to the action proposed was expressed by Representative James P. Buchanan of Texas, R. Y. Stuart, Chief of the United States Forest Service, and C. E. Rachford, in charge of the Branch of Grazing. The Chief Forester took the position that if western stock men are in need of financial relief the Committee must decide the wisdom of the policy of extending relief through the National Forests to a comparatively small percentage of livestock owners in western states. He said that only about one-fourth of these owners hold permits to graze the National Forests and that the fees charged by the Federal Government are considerably lower than the rental costs of grazing on comparable lands in private ownership.

Asked by a member of the Committee if the grazing privilege could be disposed of on the basis of competitive bids, Mr. Stuart replied that if the grazing fees are to be subject to repeated and continued attacks by permittees seeking reductions in fees the Government might be forced to resort to the competitive bid method. He felt, however, that the method would present some difficulty in protecting small owners whose preferences have been recognized for over twenty years. He admitted that the competitive system would unquestionably yield the Government a larger revenue and that it would not, as had been stated to the Committee, necessarily result in the use of the forest range by nomadic owners. He said there are plenty of livestock owners in the National Forest states not now privileged to graze the forest ranges that would be glad of the opportunity and would assure complete utilization of the forage.

Representative Buchanan, who on January 24 introduced H. J. Res. 575, providing that grazing fees shall be maintained at their established scale, told the committee that it was clearly apparent to him that a reduction of grazing fees is bad business.

"For several years we have been averaging, on forest grazing fees, about \$1,600,000," said Mr. Buchanan. "The cost of administration and improvements have amounted to about \$1,000,000, so we have made about \$600,000 on account of the 80,000,000 or 85,000,000 acres of grazing lands. In other words it was a public asset. So I was surprised this year when it developed before my subcommittee that we appropriated last year about \$1,100,000, and we got back about \$820,000. In other words, the government was losing between \$200,000 and \$300,000 on the grazing lands, in this grazing business alone. That was not good business. If we cannot do any better than that we had better not appropriate for the grazing purposes in the future, because it has become a liability instead of an asset to the government. . . ."

"Of course, this reduction in fee came about in the first instance because of the insistent requests on the part of some Senators and maybe members of the House to the Secretary of Agriculture to bring about this reduction in the last year. . . ."

"The Secretary of Agriculture felt that it was a better thing that the grazing fee system

should be kept on a regular basis, under regular contracts, and not subjected to any disorganized system which would result when the Service is called upon to make those reductions.

"Then they brought pressure to bear, I mean political pressure, Congressional pressure, or Senatorial pressure, or whatever they could, to get the fees changed to what they were last year. The Secretary definitely refused and now they are bombarding the White House to get the President to overrule the Secretary in order to continue this advantage they secured over the other men in that area.

"Well, there is no justice in it; it would disrupt the business administration of these resources, when private enterprise, men who own land and grazing lands are actually using this range at a cost far below that established in the schedules of the Department of Agriculture for grazing cattle and sheep and goats.

"In other words, the government is renting this grazing land, under regular schedules of the Agricultural Department, at about sixty per cent of what was fixed . . . and while enjoying that privilege they complained, and want still further reduction."

On January 27, Senator Carey made a statement to the press which called forth the following from Ovid Butler, Secretary of The American Forestry Association, dated January 31:

"Your statement to the press relative to grazing on the National Forests, as reported in an associated press dispatch of Sunday, gives the impression that an effort is being made to increase the established rates for grazing livestock on the public forests. As quoted, you say:

"The Department is trying to ask that the stockmen be made to pay a million more so that the schools can get \$250,000."

"It would be unfortunate if the impression naturally to be drawn from this statement prevails. The fact is the stockmen are trying to get a government concession of \$1,000,000 by having the established grazing fees reduced fifty per cent. Several resolutions are pending in Congress any one of which, if passed would so operate in respect to the grazing season of 1933.

"You will recall that the present scale of grazing fees was established by Secretary Jardine in 1927 after a very exhaustive study of National Forest range values. Those fees yield the Federal Government an income of approximately \$2,000,000, one-quarter of which, or \$500,000, is returned to the states in which National Forests are located for the support of local public schools and roads.

"Your resolution, designed to cut these established fees fifty per cent is in effect, therefore, a government subsidy to a group of western stockmen amounting to \$1,000,000. If made, it will be at the expense of the taxpayers of the country, and the public schools of the states in which the National Forests are located. . . ."

"From a public policy standpoint, the proposal to extend class relief by granting concessions in the use of public natural resources appeals to us as unsound and highly dangerous. If stockmen through Congress can obtain large concessions in the price of National Forest forage, upon what grounds can Congress deny lumbermen and other users of National Forest resources equally large concessions upon other forest resources? Once Congress surrenders to such a policy, it must inevitably follow that National Forest administration will become hopelessly demoralized and public resources of tremendous value subject to political barter."

Ask the Forester?

Forestry Questions Submitted to The American Forestry Association, 1727 K St., N. W., Washington, D. C., Will be Answered in this Column. A Self-Addressed Stamped Envelope Accompanying Your Letter will Assure a Reply.

QUESTION: How much is an acre of western white pine worth as it stands in the forest?—J. P. C., Texas.

ANSWER: According to Chief Forester R. Y. Stuart, who answered a similar question before the House Committee on Agricultural Appropriations, the value, depending upon the accessibility of the timber, is from \$2.00 to \$10.00 a thousand feet, and the stands contain from 20,000 to 50,000 board feet to the acre. Accordingly, the western white pine stumpage value may range from \$40 to \$500 an acre.

QUESTION: When a selected variety of walnut is grafted upon a common black walnut stock, does any change occur in either the graft or the rooted stock?—A. W. H., D. C.

ANSWER: The influence of stock upon scion and vice versa is commonly supposed to be nothing more than a relation of host and guest, according to Dr. Robert T. Morris in his book entitled "Nut Growing." As a rule, he says, graft and stock retain their identity, but in some cases the graft changes the stock. The psychology of the graft-hybrid is not as yet understood. A practical application of the influence of stock upon graft and vice versa was noted by the orange growers of the south who found that the Satsuma orange grafted upon trifoliate orange stock bore solid juicy fruit, while the same variety when grafted upon wild sour orange stock bore fruit which was raggy.

QUESTION: I wish to establish a white oak grove on a hillside about eight hundred feet above sea level. Can I plant them directly where I wish the trees? What preparation and care is necessary? How many acorns will I need to plant an acre?—E. L. H., Connecticut.

ANSWER: Ordinarily one would prepare the ground as for a garden and after soaking the acorns twelve to eighteen hours, plant in drills eight or twelve inches apart. The little trees can grow one or two years before setting out the seedlings on the permanent site.

However, if the acorns are to be planted immediately on the permanent site the ground should be broken in strips fifteen or twenty feet apart and the seeds planted in the strips at intervals of approximately fifteen feet. To assure reasonable success they should be cultivated until well established.

White oak acorns average about fifty pounds to the bushel and approximately 150 acorns in a pound, or about 7,500 acorns in a bushel. Fresh, well cared for seeds free from worms have about eighty per cent germination or six thousand fertile seeds per bushel. If the acorns are planted at intervals of fifteen feet, 194 will be needed to plant an acre. Assuming that some must be discarded a pound and a half or

two pounds of acorns would be sufficient to plant the land.

QUESTION: To what extent are the administrators of the National Forests attempting to preserve parts of them in their natural or wilderness state?—I. M. C., Maryland.

ANSWER: The grand total of natural and primitive areas actual and pending within the National Forests is 9,259,681 acres. The Forest Service reports that nineteen natural areas have been established on National Forests in nine states. These cover 19,550 acres and with two additions under consideration the total may soon be 20,276 acres. On October 22, there were 9,018,298 acres set aside as primitive areas, with 221,107 acres under consideration for additions to the existing primitive areas. These are in eleven states and include fifty-seven areas.

These are attempts to preserve wilderness conditions, but there are administrative differences in handling natural areas from those termed primitive areas. The natural areas are located and administered so as to be as nearly like the original untouched nature as possible, while primitive areas are undeveloped, but accessible to those who will make the effort.

QUESTION: How much was spent in attempting to control chestnut blight?—R. S. K., New York.

ANSWER: Figures secured from the Bureau of Plant Industry of the United States Department of Agriculture indicate \$500,000 was spent in the effort to control chestnut blight. Since 1914 very little has been done.

QUESTION: Is autumn a good time to move a tree, or is it better to wait until the spring?—E. R., New York.

ANSWER: Trees may be moved successfully in the fall but usually more successfully in the early spring. Fall planting is best if done during September and early October rather than during late November and early December. Large trees transplanted in the fall should be mulched heavily around the base with straw or manure, and the trunk and larger branches wrapped with strips of burlap to keep them from drying.

QUESTION: What is the true name of the mimosa tree with the delicate pink blossom so frequently planted in the vicinity of Washington, D. C.? Where is it native?—A. W. B., District of Columbia.

ANSWER: This is not a true mimosa, but may be more properly described as the silk tree. The botanical name is *Albizia Julibrissin*. It is native in Persia, Japan, and other parts of warm temperate Asia.



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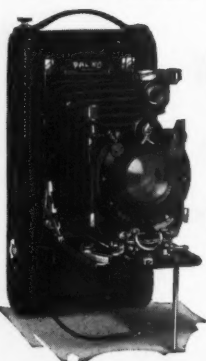
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Nut Tree Planting Awards

Thirty-two Boy Scouts are dressed in the last word of the scouting mode according to "High Lights of 1932," the annual report of the National Nut Tree Planting Council. These models of what the well-dressed Scout will wear were awarded complete outfits because of the feats they accomplished as participants in the nation-wide nut tree planting program. They are the champion nut gatherers, each having collected a minimum of twenty-five bushels of black walnuts. Two silver loving cups, one awarded on a troop basis, the other on an individual basis, and thirty-two complete scout uniforms have been presented to the youngsters who established records in this patriotic conservation program.

The champion of them all is Harry Ebert, Eagle Scout of Winchester, Virginia, who collected ninety bushels of walnuts. To him went a silver cup and one of the outfits consisting of hat, shirt, breeches, hose, shoes, belt, and neckerchief. Last year's champion, Clyde Sowers, of Gettysburg, Pennsylvania, ran him a close second by gathering seventy-five bushels of nut seeds. Third honors went to Dwight Sites of the same Tribe of Lone Scouts. He gathered sixty-seven bushels.

"Although the individual records are amazing as anyone will appreciate who has ever gathered even a single bushel of nuts," said G. H. Collingwood, secretary-treasurer of the nut tree planting program and forester of The American Forestry Association, in announcing the awards, "the remarkable accomplishments of groups must not be underestimated."

Boy Scouts in the York-Adams Council led by Scout Executive Ray F. Zaner gathered 1,018 bushels of black walnuts on the Gettysburg area. Scout Executive Frank R. Horton directed the Shenandoah Council Scouts in a campaign which netted 558 bushels, and Scouts under H. F. Cotey, Scout Executive of the Vicksburg, Mississippi, area sent to Washington sixty-five bushels. Not only did the Washington, D. C., area Scouts, led by Linn C. Drake, gather fifty bushels of nuts from Mount Vernon, Arlington, the Lincoln Memorial grounds, and from trees in and near the District of Columbia, but they sponsored the Pilgrimage to Mount Vernon led by Dan Beard and the dedication of the National Historical Grove in the National Capital.

A loving cup was awarded to Fairfield Troop of the Gettysburg area because its sixteen members gathered 467 bushels of walnuts—nearly one-half of the total amount presented at the historic battlefield.

The establishment of the National Historical Grove of Trees with Traditions is the achievement second in importance to the gathering of approximately 2,000 bushels of nut seeds, according to Mr. Collingwood. "This grove is a permanent record to the love of country evidenced by thousands of boys in their participation in a tree planting program as well as a permanent tribute to American heroes. Eight trees descended from those on historic grounds have already been planted. Twenty years from now this park will possess a grove of trees beautiful in itself and significant in the American traditions which it memorializes. As the news of this Hall of Living Memorials goes through the country, every section associated with American heroes and history will wish to be represented there."

The report covers all the activities of 1932 in connection with the national nut tree planting program as well as the gathering and planting of seeds. It includes scientific work, distribution, literature, noted personages and special occasions, organizations participating, publicity, employment, and the financial statement.

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Deer Decrease in California

A decrease in the number of black tail deer in the Trinity and Mendocino National Forests averaging forty-five per cent during the past ten years and a decrease of mule deer amounting to 10,000 head during the past year in the Lassen, Modoc and Shasta National Forests is reported in the annual survey of wild life compiled by observation of forest officers in the eighteen National Forests of California. This area includes Columbian Black Tail country from Siskiyou County south to Clear Lake in the Coast Range and the northern Sierra, and southern Cascade habitat of the Rocky Mountain Mule Deer. Small increases of deer are reported in nearly all other forests.

Unfavorable weather in the winter of 1931-32, hunting, predatory animals and a disease diagnosed as *bacillus necrophorus* are given as the chief reasons for the losses. The disease seems largely confined to the mule deer range where it has been reported for several years. No estimate has been made of deer mortality due to disease. Other big game animals—bear, elk, mountain sheep and antelope—are increasing slightly. Valley quail, sagehens, and grouse are increasing or are in a satisfactory condition, but almost all forests report a decrease of mountain quail compared to last year due to a heavy winter and predatory animals.

Forest and brush cover for protection and forage for deer on both summer and winter ranges within and outside of the National Forests has been impaired by forest and brush fires. The Lassen Forest reported a heavy loss from starvation last winter due to the burning of the winter ranges in the foothills. A number of forests report losses of deer, game birds and other wild life destroyed in fires, and the Matilija fire on the Santa Barbara National Forest is believed to have killed thirty per cent of the deer and birds in that area.

Large Bequest Willed Virginia Forestry School

Under the terms of the will of the late Dr. Walter M. Seward, of Triplet, Brunswick County, Virginia, his entire estate, valued at \$250,000, was left to the University of Virginia for the "maintenance and upbuilding of the School of Forestry at the University." More than 3,000 acres of timberland in Brunswick County, included in his estate, were directed to be used for "practical demonstrations in the art of forestry."

In his will, Dr. Seward expressed a desire that "a modern and thoroughly equipped sawmill with all necessary accessories be installed upon my land in Brunswick County, that it be operated under the direct supervision of the School of Forestry of the University of Virginia, and that instruction be given particularly to the youth of Brunswick County." The handling of the remainder of the estate was left entirely to the judgment of the University, which is named executor.

Dr. Seward, an alumnus of the class of '86, died at the University Hospital on December 20 at the age of seventy-two. During his lifetime he made a number of generous contributions to the School of Forestry, always taking a keen interest in its development. For many years he has successfully operated his forest lands, taking advantage of simple forestry practices as far back as thirty years ago.

The increased income, it was stated, will enable the School of Forestry to add other courses until the five major branches of forestry are covered. For eight years only one forestry course was offered but in 1928 three new courses were added—silviculture, forest policy and forest management.



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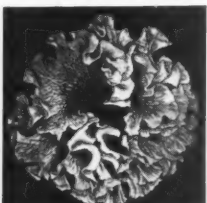
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F. W. BROW NURSERIES, ROSE HILL, N. Y.

Conservation Calendar in Congress

Published monthly while Congress is in session as a service to the members of The American Forestry Association. This calendar contains bills introduced between January 3 and January 31, and those introduced prior to those dates upon which any action has been taken.

BILLS APPROVED

S. 4791—ASHURST—Amending the United States mining laws applicable to the city of Prescott municipal watershed in the Prescott National Forest within the State of Arizona. Passed Senate June 8. Passed House January 16. Approved January 19, 1933.

H. R. 14436—BYRNS—First Deficiency Appropriation Bill, amended. Passed House January 27. Passed Senate January 28. Approved January 30.

APPROPRIATIONS

H. R. 13975—First Deficiency Appropriation bill. Passed House January 4. Passed Senate amended January 12. Vetoed by President January 24.

H. R. 14363—Appropriations of the Departments of State, Justice, Commerce, and Labor, for the fiscal year ending June 30, 1934. Carries \$1,756,740 for the Bureau of Fisheries. Report No. 1890.

H. R. 13710—TAYLOR—Making appropriations for the Department of the Interior for the fiscal year ending June 30, 1934. Reported to Senate January 25. Report No. 1109.

H. R. 13872—BUCHANAN—Making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1934. Passed House December 30, 1932. Reported to Senate January 31, 1933. Report No. 1133.

INDIAN AFFAIRS

S. Res. 323—FRAZIER—To continue the general survey of Indian conditions throughout the 73rd Congress. To Committee on Indian Affairs January 10.

H. R. 6684—LEAVITT—Amending Act of June 25, 1910. Passed House January 16.

NATIONAL FORESTS

S. 1492—JONES—To add certain lands to the Columbia National Forest in the State of Washington. Passed Senate June 24, 1932. Reported to House January 18, 1933. (H. R. 5477.)

H. R. 12126—TAYLOR—To add certain lands to the Gunnison National Forest, Colorado. Passed House January 16.

H. R. 14123—FRENCH—To add certain lands to the Salmon National Forest. To Committee on Public Lands January 10.

H. R. 14226—FRENCH—For the inclusion of certain lands in the National Forests in the State of Idaho, and for the creation of a State Forest. To Committee on Public Lands January 13.

S. 5310—STEIWER — To amend the United States mining laws applicable to the National Forests within the State of Oregon. To Committee on Agriculture and Forestry January 3.

H. J. Res. 575—BUCHANAN—Authorizing the fixing of grazing fees on lands within National Forests. To Committee on Agriculture, January 24.

H. R. 118—ENGLEBRIGHT—Extending provisions of Forest Exchange Act approved March 20, 1922, to certain lands adjacent to Modoc National Forest, California. Reported to House January 26. Report No. 1916.

NATIONAL PARKS

S. 5233—REED—To provide for the protection of national military parks, national parks,

battlefield sites, national monuments, and miscellaneous memorials under the control of the War Department. Reported in Senate without amendment January 10, 1933.

S. Res. 226—CAREY and KENDRICK—To investigate the activities of the National Park Service in the Jackson Hole, Wyoming, region. Reported favorably with amendments January 16, 1933.

H. R. 14302—STEWART—To provide for the creation of the Morristown National Historical Park in the State of New Jersey. To Committee on Public Lands January 18. (S. 5469.)

S. 4374—BINCHAM—Empowering superintendent of Hawaii National Park to perform functions now performed by the United States commissioner of said national park. Passed Senate June 8, 1932. Reported to House January 27, 1933. Report No. 1927.

S. 5508—COPELAND—To establish a national military park to commemorate the campaign and Battles of Saratoga, in the State of New York. To Committee on Military Affairs January 25.

PUBLIC DOMAIN

H. R. 14177—FRENCH—Authorizing the Secretary of the Interior to enter into cooperative agreements with the State of Idaho and private owners of land in Lemhi County, Idaho, for grazing and range development. To Committee on Public Lands January 11.

H. R. 13559—FRENCH—To create grazing areas in the Public Domain in the State of Idaho. Report No. 1840. To Committee of the Whole House on the state of the Union January 10.

H. Res. 340—EVANS—To consider H. R. 11816, concerning grazing on Public Domain. To Committee on Rules, January 4.

REORGANIZATION

H. Res. 334—COCHRAN—Disapproving executive orders grouping, coordinating, and consolidating certain executive and administrative agencies of the government. Passed House January 19.

H. R. 13994—KELLER—To create an Administration of Public Works with authorization of \$1,000,000 for improvement of rivers and harbors, reclamation work, highway construction, etc. Carries authorizations for forest roads and trails, and for reforestation and fire prevention. To Committee on Ways and Means January 3.

S. 5121—CUTTING—To amend Emergency Relief and Construction Act of 1932 by authorizing cooperation by Federal Government with States and Territories in relieving distress among unemployed needy transients.

S. 5538—BRATTON—To establish a Department of Development and Conservation, to abolish the Department of Agriculture and the Department of the Interior, and to transfer the functions thereof to the Department of Development and Conservation. To Committee on Public Lands and Surveys January 27.

WILD LIFE

S. 5302—FRAZIER—To grant to the State of New York and the Seneca Nation of Indians jurisdiction over the taking of fish and game within the Allegany, Cattaraugus, and Oil

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Spring Indian Reservations. To Committee on Indian Affairs January 3, 1933.

H. R. 14266—WINGO—To authorize the creation of a game refuge in the Ouachita National Forest in the State of Arkansas. To Committee on Agriculture January 16.

S. 5485—WALSH—Establishing a State game refuge on islands in the Egg Lakes in the White Earth Indian Reservation in the State of Minnesota. To Committee on Indian Affairs January 21.

S. Res. 340—WALCOTT—Authorizing \$10,000 to continue investigation of wild-animal life. To Committee to Audit and Control the Contingent Expenses of the Senate, January 24.

MISCELLANEOUS

S. 5336—WAGNER—To amend Emergency Relief and Construction Act of 1932, to make loans to states for public works. To Committee on Banking and Currency January 9.

H. R. 13995—LEWIS—To provide for cooperation by the Federal Government with the several States in relieving hardship caused by unemployment. Includes wages for work on the basis of need. To Committee on Ways and Means January 3.

S. 5125—COSTIGAN and LA FOLLETTE—To provide for cooperation with the several States in relieving the hardship and suffering caused by unemployment. To Committee on Manufactures December 8. Reported to Senate January 26.

Roosevelt to Launch Gigantic Experiment in Developing Tennessee Watershed

(Continued from page 126)

River below. Prior to 1912 Army engineers spent, over a period of fifteen years, about ten million dollars in dredging out sand and gravel bars and in confining the river in places into a narrower channel, by means of dams and jetties, for the purpose of increasing the current and, in so far as possible, to scour out and carry this extra load of sediment.

The stream-flow of the Tennessee River and its tributaries has been greatly modified by human activities in the past one hundred years. From a state of comparative balance and sustained stream-flow with a minimum silt burden, the flow of the stream has been thrown into great extremes of high and low water and burdens of silt have been greatly increased.

Unregulated and heavy grazing are other destructive forces of favorable watershed conditions in the Tennessee Basin. Many fires are set out to "improve" grazing. Forest cover is destroyed to provide pastures. The principal damage from grazing itself occurs in the region of farm woods, especially in the rolling portions of the basin.

By far the most detrimental and disturbing element on the watersheds of the Tennessee River, however, has been the clearing of forest land for agricultural purposes, especially on steep slopes which have only marginal agricultural value. At the present time there is a total acreage of abandoned, worn-out and marginal land in excess of one million acres.

The occurrence of concentrated precipitation has given rise to many costly floods within the Tennessee Basin during recent years. It is recorded that severe floods occurred in 1926, 1927, 1928, and 1929, and that since 1925 floods have brought losses in Tennessee alone in excess of \$20,000,000.

According to the press, Mr. Roosevelt stated that as soon as he takes office he will ask the various Government departments involved to make surveys with a view to putting the proposition up to Congress at an early date.

New! The Single-Compartment "RANGER SPECIAL" WATER BAG



Quick and easy to fill. Fitted with leak-proof swivel closing lock



Rolls up into small, compact size when empty



Ideal for carrying water long distances. Conforms to back. Non-Sweating

EARLY in the Spring of 1932 it was announced that a special fabric knapsack water carrier had been developed. The volume of inquiries that resulted indicated that more than ordinary interest had been aroused. Following further research and co-operation with the forestry profession, we are now marketing a new Single Compartment RANGER SPECIAL WATER BAG—unquestionably one of the outstanding pieces of equipment for forest fire control.

Price has been brought so low that the purchase constitutes a direct initial saving over competitive equipment.

The light weight of the Ranger Special Water Bag does not tire the operator, nor scratch or bruise the back. There is no loss through corrosion or breakage—full or empty it can be dropped from back to ground without damage. No seams to leak or come apart. We will gladly send this water bag on approval—write for details and prices.

Also manufacturers of the "WAJAX" Portable Forest Fire Pump and Ranger Special Forestry Hose

FENWICK-REDDAWAY MFG. CO.

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EIGHT Choice EVERGREENS FIVE YEARS OLD

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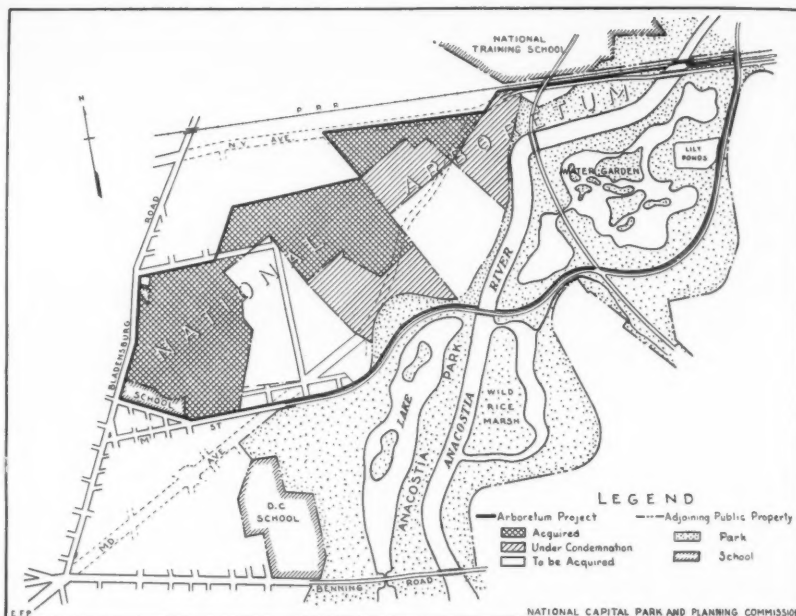
SEE PAGE 136 FOR AVAILABLE
SPRING CATALOGS

PLAN TO COMPLETE THE NATIONAL ARBORETUM

Frederic A. Delano, chairman of the Advisory Council of the National Arboretum, has advanced a plan to complete the arboretum project which has been halted by the failure of Congress to make available the money needed to block up the various tracts already acquired and available. Mr. Delano's plan is to have the Department of Agriculture au-

six years ago, but has left it uncompleted and therefore unproductive."

The total area projected for the arboretum under the plan of the National Arboretum Act approximates 716 acres. Congress appropriated, however, only \$300,000, and specified that the cost of the land should not exceed 125 per cent of the assessed valuation. The purchase of 190 acres was completed within



STATUS OF THE PROJECT FOR A NATIONAL ARBORETUM

While all boundary properties are acquired or otherwise in public ownership, two large parcels of land remain in private ownership in the heart of the Arboretum project. These two private properties, together with those under condemnation for which insufficient funds have been appropriated, have access by dedicated public streets and are in danger of development.

thorized to lease the remaining land needed on a rental basis, with an option to purchase later. Such authority, he believes, would clear the present situation to the extent of permitting a National Arboretum to function.

"Inasmuch as the National Arboretum Act as it now stands provides that the purchase price of any land for the arboretum shall not exceed 125 per cent of the assessed valuation last preceding the purchase," declared Mr. Delano, "some method of procedure to complete the purchase of the condemned land, and the acquirement of the remaining tracts, must be worked out. I venture to suggest that the Department of Agriculture be authorized to lease on a rental basis of six per cent and taxes, with an option of purchase in three years, at not exceeding, say, \$1,800 an acre, at the end of which time, or at any time prior thereto, the Government might complete the purchase.

"An argument in favor of this projected development is that the land stands idle, largely yielding no taxes, while the expendi-

ture already made is as yet not functioning as a shrub and tree laboratory. Already eighteen of our states have indicated an active interest in the general subject and have created arboreta. The Federal Government, on the other hand, took up the project these limitations at a cost of \$228,831. Later, an additional five tracts aggregating seventy-eight acres were condemned, but the appraisals exceeded considerably the valuations based on 125 per cent of the assessment. In addition the Ross Tract and the "Hickory Hill" Tract, aggregating 115 acres, remain to be purchased.

As the arboretum situation now stands, the Government has completed purchase of 190 acres; 333 acres of marsh land in the Anacostia Valley have been made available through reclamation by the Army engineers, making a total of 523 acres now available for arboretum purposes. The project is held up by the tracts there is no money to purchase because these tracts, totalling 115 acres, lie in the center of the area.

COLTON BILL PASSES HOUSE

Responsibility for establishing districts to regulate grazing and protect the land on over 180,000,000 acres of public domain in the Western States would be given the Secretary of the Interior by the passage in the House of Representative Colton's bill, H. R. 11816, on February 7. This is legislation for which Mr. Colton has been working for eight years.

Testimony presented to Congressional Committees during the past two years reveals that lack of governmental authority to control grazing on public lands has resulted in their severe injury by overgrazing.

The bill now goes to the Senate, and must first be considered by the Committee on Public Lands.

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CAMERA QUERIES

Question: I am having little success in photographing subjects in which there is a great deal of snow. The result is lifeless. What is my trouble?—B. B. D., Maryland.

Answer: Undoubtedly your trouble lies chiefly in the improper use of light. Sunlight enhances white beauty, and best results, especially if you are a novice, may be obtained by working toward the sun so that the shadows will radiate into the picture. As a rule snow scenes require less exposure than other subjects, due to the abundance of light in the subject itself. To overexpose tends to flatten out the shadows.

If one is equipped, color sensitive films should be used, for snow shadows are usually blue or violet, and it will be found desirable to use a ray filter to properly record these tones. If a hand camera is used, the best results will be obtained with the new Verichrome film, allowing for a short exposure.

Question: Who made the first photograph, and when?—J. B. S., District of Columbia.

Answer: In the March, 1931, issue of AMERICAN FORESTS, Fred H. Kiser wrote as follows: "Sometime around 1780 the darkening action of sunlight on silver chloride was investigated by W. K. Scheele, and to his native country of England belongs the honor of first producing a photograph from his observations. The first to develop pictures that were unaffected by light, however, was Nicephore de Niepce, around 1814. Later, Niepce and Louis Jacques Mande Daguerre cooperated in these experiments, perfecting in 1839 the first Daguerreotype, and in 1844 Daguerre improved the method itself by using bromine and iodine, adding greater sensitiveness. Thus the world was given instantaneous pictures. In 1831 the first photographic lens was made by V. and Ch. L. Chevalier, of Paris."

Question: How is real beauty achieved in photography?—H. B. U., Florida.

Answer: Undoubtedly the beauty of photography is the power of rendering graduations, and this power is increased or diminished in exact comparison to one's understanding regarding the light control system of camera or kodak, which is exposure.

Question: What time of the year can I make the quickest exposures?—G. P., New York.

Answer: The actinic value of light changes with the altitude of the sun. From April 15 to August 15, light values are highest and are of about the same intensity at the same hours of the day. During this period one can make the quickest exposures. The best daily working time is on an average from 9 a. m. to 4 p. m., depending, of course, as to where you are—East, West, North, or South.

Question: What is the best method to use in making close-up pictures of birds?—H. A. S., California.

Answer: With the exception of feeding pictures, nearly all close-up work with birds should be done from a blind and during the nesting season, which runs, roughly speaking, from late in February to the end of August. Only during this period does the natural caution of adult birds yield to boldness.

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Trees strong. Transplanted Stock. True northern strain. For quick, beautiful, graceful trees plant Chinese Elms. 3 to 4 ft., 5 for \$1.35, 10 for \$2.60; 4-5 ft., 5 for \$2.20, 10 for \$4.00, prepaid. 6-7 ft., express collect, five or more @ 70c each. Catalog (mention this paper) free.

SWEDBERG NURSERIES, Battle Lake, Minn.

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CERTIFIED White Pine, free from blister rust, Norway and White Spruce, Scotch and Red Pine and other varieties. Know our reasonable prices. Get our figures on Contract Planting.

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1933 Garden Literature Available

- Belcher, H. D., Brook Forest, Colorado. *Price list—Evergreen Seed and Seedlings.*
- Bountiful Ridge Nurseries, Box H, Princess Anne, Md.—*Catalog of Trees, Vines and Plants. Valuable information for home owners, commercial orchardists and small fruit growers.*
- Brow Nurseries, F. W., Rose Hill, Onon. Co., New York—"Bargain Booklet" of Roses, Shrubs, Perennials, Vines, Berry Plants, Bulbs, etc.
- Central Maine Forest Nursery, Skowhegan, Maine—*Price List—Evergreen Nursery Stock for Forest Planting—Both Commercial and Decorative.*
- Clark, Jr., Ernest S., Windsor, Connecticut—"Newer Glads", Spring 1933.
- Diener, Richard, Oxnard, California—*Illustrated Catalog—Flower Seeds, Vegetable Seeds, Bulbs, Plants.*
- Elfgren Nurseries, East Killingly, Connecticut—*Price List—Evergreen Tree Seedlings and Transplants.*
- Ferndale Nursery, Askov, Minnesota—*Hardy Ferns, Wild and Rock Garden Plants, Evergreen Seedlings and Transplants.*
- Franklin Forestry Company, 89 State Street, Boston, Mass.—*Trees, Shrubs, Plants, Ornamental Evergreens.*
- Herbat Brothers, Inc., 92 Warren Street, New York City—*Tree, Shrub and Perennial Seeds.*
- Hill Nursery Company, D., Dundee, Illinois—"Simple Lessons in the Use of Evergreens", "Evergreen Bargain Offer" and price list Hill Evergreens.
- Jones Nurseries, J. F., P. O. Box F-356, Lancaster, Pa.—*Grafted and Budded Nut Trees.*
- Keene Forestry Associates, Keene, New Hampshire—*Price list Evergreens for Forest Planting.*
- Kelsey Nursery Service, F. W., 50 Church Street, New York City—*28-page catalog with more than 50 color photographs of evergreens, trees, shrubs and vines, also Climate Map covering North-eastern part of U. S.*
- Morris Nursery Company, The, 47 West 34th Street, New York City—*Illustrated catalog of Hardy Deciduous and Evergreen Trees, Vines, Shrubs, Roses, Fruits.*
- Naperville Nurseries, Naperville, Illinois—*Perennial Plants, Trees, Shrubs, Vines and Evergreens.*
- Old Dominion Gardens, Lexington, Virginia—*Aristocratic Gladiolus Bulbs.*
- Ransom Nursery Company, The, Geneva, Ohio—"Evergreens for Every Purpose."
- Robbins, E. C., Ashford, N. Carolina—*Rock Garden Plants—Native Evergreens, Bulbs and Plants.*
- Scott & Sons Co., O. M., Marysville, Ohio—"Creeping Bent" Lawn and Golf Course Seed. "Lawn Care" Booklets.
- Swedberg Nurseries, Battle Lake, Minnesota—"Chinese Elm".
- Tabor, Rollin H., Mount Vernon, Ohio—"Orchard and Tree Surgery Supplies."
- Terrell's Acquatic Farms, Oshkosh, Wisconsin—*Illustrated Booklet—Wild Rice, Celery, Duck Potato Seed.*
- Thomson Nursery Company, Mansfield, Pa.—*Catalog of "Rare Garden Aristocrats".*
- Western Maine Forest Nursery Co., Fryeburg, Maine—"Add Beauty to Your Home—Plant Evergreens," *Illustrated Booklet, Evergreen Trees for Forest Planting and Lining Out.*
- Wisconsin Acquatic Nurseries, Oshkosh, Wisconsin—*Illustrated Catalog of Wild Rice, Celery and Duck Potato Seed.*

When Writing for These Catalogs and Price Lists, Please Mention AMERICAN FORESTS Magazine

National Lumber Manufacturers' Association Undertakes New Plan

With strong representation from every softwood and hardwood region, the directors of the National Lumber Manufacturers' Association unanimously approved, on December 16, the recommendation of the Executive Committee of the Board, that nation-wide support throughout the lumber and timber products industries be secured for the advancement of the "General Lumber Industry Service" of the association. In fact, the consideration brought out the forceful expression of opinion of leading lumbermen in each region, of the inability of the lumber manufacturing industry to function as a unit without the continuation of the general industry services of the association.

Endorsement was also given to the Executive Committee's approval of prompt development of the promotion programs of the American Forest Products Industries, Inc., under whose administration will come all lumber promotion work heretofore conducted by the National Lumber Manufacturers' Association, except building codes and ordinances. This latter activity will continue to be an activity of the national association itself.

The comprehensive plans considered by the directors provided for creation in due course of a third organization to be known as Wood Research Trust, Inc.

The new plans for lumber manufacturers' organization and functions were presented by Carl Hamilton, Chairman of the National Lumber Trade Extension Committee. He explained the lack of satisfactory functioning associations in some regions and hence the inability to continue the national association in the simple form of a federation of regional associations financed by the regional associations. To meet this situation, he explained the new plan of financial support for the national association. He outlined the character of work to be conducted by it and emphasized that each activity is of a type of vital interest to all lumber manufacturers regardless of regional organization or affiliation—whether large or small manufacturers and whether of hardwoods or softwoods. These activities were enumerated as: Economics, accounting and planning; governmental relations; conservation and forestry; taxation and tariffs; transportation; trade practices; publicity; building ordinances; wood utilization; standardization; foreign markets, and the lumbermen's Blue Book.

Under the newly created American Forest Products Industries, Inc., will come, Mr. Hamilton explained, all national work involving lumber trade promotion. He called attention to the fact that these services should be and are available to timber owners, lumber manufacturers, lumber distributors and forest products industries including wood fabricators and lumber-using groups. The service of the American Forest Products Industries will thus be available to all lumber manufacturers who subscribe to the "General Lumber Industry Service" and in addition desire specific trade promotion work. He pointed out that the work planned for this new organization of the lumber and forest products industries will include the lumber trade extension work heretofore conducted through the National Association.

Girl Scouts Observe Twenty-First Birthday



GIRL SCOUTS PLANTING TREES

On March 12, 1912, the first Girl Scout troop, eight in number, was formed by Juliette Low, of Savannah, Georgia. Today, with the observance of their twenty-first birthday, there are more than 1,000,000 Girl Scouts in the country with more than 500 established camps in the forested regions.

Hundreds of thousands of girls have taken honors for campcraft, forestry, nature study, swimming and canoeing. In their forest camps, under expert instruction, they have become familiar with tree and plant life, gaining a sound knowledge of forest protection and restoration. In many instances they have undertaken reforestation projects with the same enthusiasm as the Boy Scouts.

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AMONG THE CURRENT PUBLICATIONS

Utilization of Bigleaf Maple of the Pacific Northwest, by Herman M. Johnson, Circular No. 225, of the United States Department of Agriculture. Describes an important hardwood native to the northwest which provides material for furniture and chair factories of Oregon and Washington.

Morton Arboretum, Vol. 7, Nos. 11-12. Bulletin of popular information with numerous illustrations describing the Morton Arboretum at Lisle, Illinois.

The Problem of the Pure Teak Plantation, by H. G. Champion, Bulletin No. 78, Government of India, Calcutta. Descriptions with illustrations of the management of the teak forests in India.

Report of the Reforestation Commission, 1932, legislative document No. 71, published by the New York State Conservation Department. In addition to the acts and resolutions supporting the reforestation program in New York, there are tables showing the progress of state aid to counties for 1929, 1930, 1931 and 1932 and reports of trees planted as of December 31, 1931.

Methods for the Improvement of Michigan Trout Streams, by Carl L. Hubbs, John R. Greeley and Clarence M. Tarzwell, bulletin prepared by the Institute for Fisheries Research, University of Michigan, Ann Arbor. Describes the results of investigations in improving the fishing in northern Michigan streams especially the Little Manistee River.

Calorific Values of Some Indian Woods, by S. Krishna and S. Ramaswami, Bulletin No. 79, of the Forest Research Institute, Dehra Dun, India. Descriptions and tables showing the fuel value of 181 Indian woods.

The Strength and Related Properties of Redwood, by R. F. Luxford and L. J. Markwardt, technical bulletin No. 305, United States Department of Agriculture. Price 10c. Tables, grafts and descriptions which reveal the strength of redwood under different conditions of growth and location.

Nature Camps, bulletin of the Pennsylvania State College. Contains illustrated material describing summer courses in nature study available at Pennsylvania State College.

Common Trees and Shrubs of Pennsylvania, by George S. Perry, Bulletin No. 33, revised, of the Department of Forests and Waters. Descriptions with illustrations of 272 native and introduced trees and shrubs, half tone illustrations of leaves and fruit taken against cross section paper made of inch squares helps materially to identify the various species.

The Council of the Biological Society of Washington has voted the granting of a special price reduction on the following of its publications: *Natural History of the District of Columbia*, by W. L. McAtee, \$1.00—postpaid, \$1.15; *The International Rules of Zoological Nomenclature*, 50 cents; *Birds of the Washington, D. C. Region*, by May Thacher Cooke, 50 cents.

Western Red Cedar Poles. Published by Weyerhaeuser Company, St. Paul, Minnesota. Some very interesting things about red cedar poles, including handling, inspection, seasoning, treating and staining.

Book Reviews

THE FOREST TREES OF NEW ENGLAND, by Robert Greenleaf Leavitt. Published by The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts. 179 pages—Illustrated. Price \$1.75.

Designed originally as a handbook for visitors to the Arnold Arboretum, this little book contains a surprising amount of information about native trees and much that pertains to them. The interest extends far beyond New England, for to quote Mr. Leavitt, "Not one of the New England trees is confined to this small province. * * * some kinds of trees not native to America are included. These are species in cultivation and so often encountered, if one begins the study of trees, that it is very desirable to have at hand some information about them. And it is good old New England tradition to heap the measure more than full."

Besides the chapters which deal with the several trees, and the section illustrating the leaves of many trees, there are interesting informative chapters, and unexpected quotations from many authors. One learns, for instance, that the thousand-year lease under which the 260 acres of Arnold Arboretum are deeded by Harvard University to the City of Boston was made possible in 1872 by a gift of money from James Arnold, a merchant of New Bedford. One learns also that the sumacs are members of the family of tropical plants that give us the Cashew, Pistacia, and other important nuts. Again the reader is encouraged to imagine himself like Alice in Wonderland, capable of becoming smaller and smaller until he is able to enter a maple leaf through one of the pores and there see the arrangement of a model sugar mill.

Scientific information is presented here briefly, in simple words and with sufficient imagination to intrigue any reader.—G. H. C.

BIG GAME SHOOTING IN AFRICA, by Major H. C. Maydon. Published by the J. B. Lippincott Company. 445 pages—Illustrated. Price, \$7.50.

Africa is a large continent, and holds within its jungle the greatest hunting grounds in the world. Any book having to do with hunting, especially big game shooting, and applied to the whole of the continent, from Morocco to the Cape, from Kenya to Angola, must possess a great variety of interest and a wealth of information if it is to serve the purpose intended for it. This Major Maydon's book does. It not only tells where the various kinds of game may best be found, but how they should be tackled, and when. Moreover, unlike books of an analogous character, each district is dealt with by several well known hunters who have special knowledge of the country about which they write. One of the finest books of its kind ever done.—E. K.

SONNETS OF SCENERY, by Willis Hudspeth, Omaha, Nebraska. 110 pages. Price, \$1.00.

This poet interprets with clear feeling the world of the out-of-doors. Grouped under five headings, "Scenes of the South and West" and "Pioneering in the Middle West," are particularly fine, and his work will delight the lover of the wilderness.—L. M. C.

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FORESTRY IN CONGRESS

Reorganization and consolidation of the various departments of the Government, as recommended by President Hoover, December 9, was turned down by the House of Representatives by a vote of 202 to 176 on January 19. Criticizing the President's plan, Representative Cochran, of Missouri, Chairman of the Committee on Expenditures in the Executive Departments within which government reorganization was considered, said:

"The President places the National Park Service in a division with education and health. Would it not have been better to have grouped the Forest Service, with its forest reservations which are used for recreation, with the National Park Service and added the Forestry Division of the Indian Service, the Bureau of Fisheries, and the Biological Survey, as well as the care of National Monuments and National Cemeteries?" Continuing, Mr. Cochran cited, "The General Land Office is in a division of land utilization in the Department of Agriculture. His representative before the committee expressed the opinion that the utilization of the public domain for agricultural purposes was more important than the adjudication of applications for oil and gas leases, coal mining permits, and so forth. I do not share the opinion. The General Land Office and the Geological Survey belong together. The President separates them."

Subsequently, in connection with the proposal to transfer National Military Parks, Monuments and Cemeteries from the War Department to the Department of the Interior, Representative Colton, of Utah, remarked, "No one will seriously contend that the Park Service of the Government should be under the War Department and if a large part of the Park Service is in the Interior Department, why not put it all in that department?"

In answering Democratic charges that the President's plan of reorganization is neither economical or efficient, Mr. Colton said, "Certainly consolidation would result in a saving of public money. I would have gone further than the President went in his order. I would have taken all of the public-land activities and put them under one bureau in the Interior Department, at least I would have put them in one department. The Forest Service, the Geological Survey, the General Land Office, and, perhaps, the Reclamation Service, all relate to public-land activities, and there is no reason in the world why they should not be consolidated in one or the other department, and any man who has given any study to the question at all knows this would result in great economies to the Government."

Although governmental reorganization as ordered by the President on December 9, is impossible under the present Congress, the desire persists. In the Treasury-Post Office Appropriation bill (H. R. 13520) which has been before the Senate since December 8, is a Section giving the President powers to transfer, consolidate or abolish the whole or parts of any Executive Department. Like the Economy Act under which President Hoover attempted to function, Congress reserves sixty days in which to approve the executive order.

On January 12 and 13 the Senate Select Committee on Conservation of Wild Life Resources, led by Senator Walcott, of Connecticut, and assisted by Senator Hawes, of Missouri, received testimony from representatives of national and state conservation and wild life associations concerning possible reorganization of government conservation activities pertain-

ing to organic, or naturally renewable resources.

The representative of The American Forestry Association referred to the meeting with the Director of the Bureau of the Budget on November 11, when representatives of seven national conservation associations presented reasons for the logical classification of such conservation agencies as the United States Forest Service, the Biological Survey, the Bureau of Fisheries, and the National Park Service within the Department of Agriculture, on the ground that each of these bureaus is designed for the preservation and growth of animal and plant life in relation to the soil.

Specifically answering questions which accompanied the invitation to appear before the Committee, he declared that The American Forestry Association recommends that Federal activities relating to organic conservation should be grouped under an Assistant Secretary in the Department of Agriculture responsible to the Secretary of Agriculture; and through him to the President.

Senator Bratton, of New Mexico, has introduced S. 5538, consolidating the Interior and Agriculture Departments. He estimates this would save at least \$100,000,000 a year.

On January 16, Senator Carey, of Wyoming, reported S. Resolution 226 from the Senate Committee on Public Lands amended to authorize an investigation of the National Park Service, the Snake River Land Company, and other organizations in connection with a proposed enlargement of the Yellowstone and Grand Teton National Parks. He followed this on January 27, by placing in the *Congressional Record*, excerpts from confidential letters of Horace M. Albright, when Assistant Director of the National Park Service. This resolution is more specific than Senator Brookhart's S. J. Res. 255 which has lain on the table since June 27, 1932.

Establishment of fees for the grazing of livestock on National Forests comparable to those of 1931 is requested in H. J. Res. 575 introduced by Representative Buchanan, of Texas, on January 24. This is the first move to counteract the several resolutions already before the Senate and House to continue the fifty per cent reduction of grazing fees granted by Secretary Hyde in 1932. Meanwhile Representative Eaton's H. J. Res. 517 to continue 1932 grazing fees through the year 1933 was transferred from the Committee on Public Lands to the Committee on Agriculture. On January 27, the House Committee on Agriculture opened hearings to consider the grazing fees on National Forests.

Authority to modify the terms of uncompleted contracts for the sale of Indian tribal timber will be given the Secretary of the Interior if H. R. 6684 as passed by the House on January 16 is favorably acted upon by the Senate. The Indian Office believes that a revision of existing contract prices will result in larger returns to the Indians than if the existing contracts are forfeited.

On January 16, the Colton bill, H. R. 11816, to provide for adequate protection of the public domain under the Department of the Interior, appeared on the House Calendar but after objection by Representatives La Guardia, of New York, and Blanton, of Texas, was again passed over. That 35 per cent of the gross receipts shall be paid by the Secretary of the Treasury to states in which grazing districts are located was criticized by Representative Blanton. Representative Colton explained that this is comparable to the 25 per cent and 10

per cent of gross receipts of National Forests returned to the States for school and road purposes. Mr. La Guardia's objection was that "once a lessee of any importance enters into a lease, he practically has a stranglehold on the property, because a subsequent lessee would have to buy the fences and his equipment and would be absolutely at the mercy of the original lessee." Mr. Colton replied, "It would be taken over at an appraised price and the permittee would have a voice in determining its value."

In the Treasury-Post Office Appropriation bill, H. R. 13520, as passed by the House and now before the Senate is Section 19 with provisions for discontinuing permanent annual appropriations. This includes an item for maintaining the National Forest Reservation Commission together with payments to the states and territories such as are based on 25 per cent and 10 per cent of National Forest receipts. These total \$1,335,475 and will undoubtedly have to be entered in a Deficiency Appropriation Bill if they are not cared for in this routine manner. No saving will be accomplished on the Forest Service items and local communities may be embarrassed because of delay in receiving payments which have been assured them by the Federal Government.

The Department of Interior Appropriation Bill, H. R. 13710, was reported to the Senate on January 25, with increases totaling \$20,940 to the National Park Service. These restore funds to the Acadia, Lassen Volcanic and Zion National Parks, and add \$7,000 for fire prevention. The First Deficiency Bill, H. R. 13975, which carries \$1,000,000 for paying costs incurred while controlling fires on National Forests during the past year, was vetoed by the President on January 24, on grounds that the legislative determination of individual tax returns, aggregating \$28,000,000, is unconstitutional. The veto was sustained and by January 29, a new bill, H. R. 14436, with the refund item eliminated, had been passed by both houses.

Appropriations totaling \$1,765,740 for the Bureau of Fisheries are in H. R. 14363, carrying appropriations for the State, Justice, Commerce and Labor Departments as reported to the House on January 21. This is \$210,280 below the current year's appropriation for Fisheries. More than half of this is taken from studies on the propagation of food fishes and the Alaska General Service. Of special significance is the removal of the entire amount of \$13,900 authorized for regulating interstate transportation of black bass. If some portion of this is not restored there will be no money to enforce the Federal Black Bass Law.

No action was taken on the Agricultural Appropriation Bill, H. R. 13872.

The Senate would authorize \$10,000 with which to continue the Committee on Wild Life, if favorable action is taken on S. Res. 340, introduced by Senator Walcott, of Connecticut, on January 24.

Pulp and Paper Industry Suffers Under Depreciated Currency

Increasing imports of pulp and paper from Sweden, Norway, Finland and other countries which have gone off the gold standard has forced the pulp and paper industry to join other industries in urging federal legislation which would levy fees upon imports to offset the advantages of depreciated currency competition in domestic markets. Testimony before a sub-committee of the House Ways and Means Committee during the week of January 23, on H. R. 13999, known as the Hill bill, and other similar bills reveals that American pulp and paper mills in all parts of the country are suffering. European paper

as well as pulp is now being sold in America at prices which undermine American producers. According to William S. Bennett, importations of wrapping paper from Sweden have increased 616 per cent, while the Seattle Chamber of Commerce reports that only three out of thirty-four pulp mills in the State of Washington are now operating.

Representatives of the American Paper and Pulp Association stated that American production has been slowed down, imports have been increased, and paper prices have been thrown into chaos. Their testimony was supported by men from North Carolina, showing that farmers who depend upon pulpwood as a cash crop from their woodlands are seriously hampered. Timberlands in many regions are of doubtful value, declared Stuart B. Copeland, of Bangor, Maine, and fear of the entire loss of the pulp industry puts these lands into the class of frozen assets. He said further that the producers of pulpwood are facing a rapidly diminishing market, and the migration of the pulp industry to Europe threatens to make the timberlands in many regions a liability instead of an asset.

Bills to establish compensating duties against nations with depreciated currencies will be considered by the House on February 13.

Conservation—The Keystone to Prosperity in 1933

The United States is entering the New Year with a tremendous wastage of resources, millions of men out of employment and millions of acres of land and forest wealth suffering from the lack of management, according to Professor P. A. Herbert, of the Forestry Department of Michigan State College. A simple workable remedy for both of these conditions is to use the men out of employment to manage the other natural resources, he declared. "Technocracy," according to Professor Herbert, "will not answer our conservation or unemployment problem. We need man power to properly administer the millions of acres of forest land in the country and we have that man power deteriorating in idleness. Unemployment in the forest land regions of the country can be wiped out in 1933 and urban-agricultural unemployment materially reduced if the federal government, the state, and the private land owners would only be willing to think beyond tomorrow."

"True," states Professor Herbert, "this unemployment relief measure will cost money, but so does the dole or any other relief measure. The advantage of forest land management is that it would provide a wholesome productive outlet for human energies and practically every dollar spent would go direct to those needing relief and would eventually be returned threefold with interest to the public treasury or to the private investor. Every project would be distinctly self-liquidating in character."

"The Federal government" continues Professor Herbert, "by expanding its National Forests through the purchasing of five million more acres and intensive management could alone employ 60,000 men over a three year period in the Lake States at a total cost of probably not over \$30,000,000. The states can similarly provide additional employment on state forest projects and the extension of loans by the Reconstruction Finance Corporation or the federal land banks to private land owners at low rates of interest in order to practice forestry and other conservation measures would shortly bring about the productive utilization of every acre of land in the United States and do more to wipe out the depression than any other single program."

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THE ROMANCE OF CORK

(Continuing from page 113)

and recent history clusters thickest about the cork forests. Here Roman battled Berber and made Lusitania the granary of an empire; here the Legions of Allah gave the East its "Furthest West"; here the cross carried by Spaniard and Portuguese went to disastrous defeat before the crescent. Since the World War the French have given the country its first peace for more than a thousand years. Casablanca, a modern French city less than twenty-five years old and growing like a California boom town, is the center of an increasing cork trade. Not far away is old Sale where Robinson Crusoe was a Christian slave; now it is headquarters of a forest inspector who gets fire reports from steel lookout towers in forests which a generation ago no white man knew existed.

If the romance of cork forests lies partly in their history, their beauty lies partly in their coloring. Just after stripping, their trunks are cream colored below and ashen gray above. Soon the cream turns to reddish purple, fades to brown and after three or four seasons reverts to ashen gray. These color changes are almost as beautiful as those of the New England fall foliage.

The trees can be stripped only in late spring and summer. Note that one strips a cork tree. Just why one does not peel it like a birch or a hemlock no one seems to know, but in the cork business only newcomers say "peeling." The stripper may be an Arab who refers to his employer as a "Christian dog," a Spanish peon with the courtesy and grave manner of his race, or a thrifty peasant proprietor along the Riviera who is as much influenced by the life of the grand hotels as a Kansas farmer. All of them use the same methods. First they make a circular cut about the trunk at a height of from three to fifteen feet, according to the size and vigor of the tree or the customs and regulations of the district. This is followed by one or more cuts up and down the trunk and the bark is pried off with the hatchet handle sharpened to a wedge. Sometimes branches as well as trunk are stripped, but this is not good practice except on very large trees. One sees pictures of a dozen or more men at work on a

single large tree. They are interesting rather than typical. The average tree is stripped to a height of only six or seven feet and one man standing on the ground does the job.

It takes from six to fifteen years for the tree to produce another crop, the average being nine years. Too frequent or too high stripping or injury to the inner bark reduces the vitality of the tree and lowers the yield and quality of later crops. Even properly done, stripping probably reduces the tree's growth rate but does not seem otherwise to affect it. Cork always starts its journey from the tree to the consumer by the most primitive of all means of transport—on the human back. From the nearest road it may continue its journey on the back of a camel or a mule, in an ox cart or an auto truck. Since cork is very light, the size of the load often appears startling.

The cork trade too has its picturesque side. In North Africa the Government does its own stripping and sells the cork at public auctions. These are interesting affairs. Bidding is usually from the top down. The auctioneer describes each lot and names a price. If there is no taker he drops it little by little till some one says "I take it." That ends the matter. Cork goes to the swift and not the cautious. Since there is intense competition, buyers sometimes wear smoked glasses to help mask their expressions. In Europe most of the forests are privately owned and buyers usually seek the producers. Many sales are made at open air cafes and a prodigious amount of conversation and liquid refreshment is sometimes necessary to transfer a pile of cork.

Cork buyers are of many races, but they have much in common. In addition to knowing a lot about cork—no one knows all about it—and all the tricks of a trade not without guile, they must be able to speak half a dozen Mediterranean languages, be capable of figuring in half a dozen currencies and be adepts in fluctuating rates of exchange. Whether it is also necessary that they be magnificent drinkers in a climate which makes this an exacting accomplishment I am not sure, at any rate many of them are but it does not seem to interfere with their business.

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A FOREST PAGE FOR BOYS AND GIRLS

(Continued from page 123)

Hal explain. "Brooks slipped in the river and we had to dry him out."

"Where is he now?"

"I can't come out, dad," came a faint voice from the bushes, "if any ladies are present. I haven't any pants."

At this there was a great howl of laughter. "The coast is clear, come on out," said his father.

"You sure look as though you had been out fire fighting all right," the chief laughed as Brooks cautiously emerged from seclusion.

"He's a born fighter, Chief," Hal Warner said proudly. "He fought it in his bare feet."

The expression of pleasure on the Chief's face changed as his eye fell on a copy of the detective story magazine lying beside the bush.

"What's this, Brooks?"

"We met Ranger Billy and he gave it to me."

"Were you reading it?"

"I just began to look through it, and then I guess I got started a little bit." Brooks hung his head.

"All right, son. Put this around your shoulders and we'll take you home."

"I thought I could trust you," Chief Warner said when they reached home. "Through your disobedience you might have caused a fire that would have destroyed the whole Park. Now up to your room!"

An hour later Brooks was between cool, white sheets. But he was miserable. At supper he could not touch the tempting tray his mother brought him, and for hours he lay alone in the darkness of his room, remorse tugging at his heart like a great weight. The clock downstairs struck the midnight hour. Still he was sleepless.

Then he decided he wanted a slice of bread and jelly. Noiselessly he took the first step down stairs. How his feet hurt. The log burning in the fireplace flickered ghostly shadows on the walls of the living room. Adjoining was the room where his parents slept; another door led to the kitchen.

Brooks stopped suddenly as though petrified.

Standing over the sink with his back to him was a man in a dark suit, ravenously devouring watermelon. The bandit! On the table in the middle of the kitchen floor and near the sink, lay a revolver.

Forgetful of his sore feet, of the danger, all else but to win back his father's confidence, Brooks made a quick leap for the table and had the gun just as the man reeled on him. Lithe as a cat in his movements, Brooks avoided him and was on the other side of the table. "Sorry to interrupt your little watermelon feed."

Brooks curled his lip on the right side as did the heroes in his magazine stories. He squinted his eyes and made them bulge at the same time.

"Now sit down on that chair, you big stiff, and be quick about it."

The revolver in Brooks' hand was shaking recklessly and the man obeyed. There was a shuffle of feet behind him.

"Here, Brooks, I'll take care of him!"

Chief Warner, in his pajamas, relieved Brooks of the gun and the boy, whose nerves had that day been strained to the utmost, collapsed on the floor.

When he opened his eyes an hour later his father and mother were beside him.

"Say, dad, was that the bandit or was I just dreaming?"

"He was the man we were after, Brooks, and not a boy in a thousand could have done what you did. We've got him in jail now."

"I handled him just like Jim Sullivan did the crook in that story I was reading this afternoon, only I didn't make him dance to the tune of bullets. Say, dad, are you still sore at me about that magazine?"

Brooks felt the pressure of his father's hand in his. "I'm mighty proud of you. But we don't have to read that sort of stuff to be real men!"

"I always knew that book bug wouldn't do Brooks any harm," his mother said fondly.

Wilbur Would Bar Roads from Everglades Park

Upon his return from a trip through the Everglades region of Florida, Secretary Wilbur on January 7 issued a statement in which he declared that the Everglades should be preserved as a primitive area and that to this end there should be no roads and as few trails as possible built into the region. The Secretary said:

"This area has outstanding qualifications for National Park status. It should be maintained as a water or marine park and a wide area should be taken in. Every effort should be made to keep this a primitive area. I think roads should not be built through it, but that the road which now goes down to the Middle Beach and the Cape Sable area, should be improved, and this region should be the southern entrance to the Park. The northern entrance should be at Everglades. All visitors to the remote areas of the park should go by water. As few trails as possible should be built. These can be of simple construction, using elevated planks. This would avoid the mud with the change in tides and snakes. The protection of the Park can readily be brought about by rangers with small boats, and by an autogiro. It is evident that the proper development of

this Park will not be costly and that the cost of its control and management can be kept down to figures that will be largely met by the usual reasonable entrance fees.

"I need not describe the beauty of the mangrove forests, the unusual opportunities for education and inspiration as well as recreation, the marvelous bird flights, etc. These have been amply covered before.

"The one thing that worries me most is the maintenance of a fresh water supply into the upper reaches of the Shark and other rivers, so that there will be no encroachment of salt water. Such encroachment would destroy the most unique qualities of the Park. This means that a wide area to the north must be kept in a virgin condition and that no cross canals interfere with the general drainage of water from Lake Okechobee south.

"It seems to me to need prompt action by Congress, so that large funds for the purchase of these lands can be obtained from private or State sources, and so that there will not be too many small areas to purchase. There is a tendency to bring into production land that should be allowed to remain in its primitive condition."

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New Jersey Forest Acquisition

With the acquisition of 15,777 acres of forest land during 1932, New Jersey now has 54,143 acres maintained as State Forests. No new purchase units were established, all the land purchases being added to existing forests.

A purchase of particular interest was one of tax sale land of 7,000 acres for \$4,767, or a cost per acre of sixty-eight cents. This was the first large purchase of this class of land made in the State for State Forest purposes. So-called tax land may be redeemed by the owner upon payment of the tax arrears, at any time within two years following the sale by the Township, consequently, beyond fire protection activities, no forest development is contemplated until this time elapses. This purchase is only a fraction of a large area of tax land available in the badly abused pine belt and if funds are forthcoming, it was announced, thousands of acres of forest land can be purchased at a very low cost.

Pennsylvania State Forests Increased

The area of the Pennsylvania State Forests was increased during 1932 by more than 63,000 acres comprising thirty-four tracts in eighteen counties. The average cost per acre for the 1932 acquisitions was \$2.79.

The present area of the State Forests is 1,610,296 acres. The total cost of these woodlands to the Commonwealth of Pennsylvania was nearly \$4,000,000.

Minnesota Leads in Deer Bag

Figures on the annual deer bag for 1932 are coming in. To date Minnesota seems to be at the top of the list with 40,000 deer, both sexes, and Wisconsin is next with 20,000 bucks. These two states have a season for deer in even years only. Next in order comes Michigan with approximately 18,500 bucks, and California with 18,380 bucks.

The Pennsylvania figures are not yet available, but predictions are made that the kill of bucks will run somewhere between 15,000 and 18,000 as against the 25,000 bucks and 70,000 antlerless deer killed in 1931.

New York reports 6,845 bucks in 1932 as against 6,806 in 1931. New York's figures indicate the need for a drastic change in the deer hunting laws of that State. The Conservation Department, upon the advice of its Advisory Council, is planning to open the 1933 season after the breeding season instead of right in the midst of it as has been the practice in the past. New York also should increase the antler requirements. At present a deer with antlers three inches long is legal.

As to the value of the deer crop, Commissioner W. D. Stewart of Minnesota estimates that each deer cost Minnesota's hunters \$89.80. The ratio of successful hunters was unusually high, one to every two. In California the Fish and Game Commission estimates that one hunter out of six was lucky, and that the deer hunters of California spent \$10,000,000 this past season in pursuit of the wily bucks.

Financial Statement

THE AMERICAN FORESTRY ASSOCIATION
WASHINGTON, D. C.

Balance Sheet as of December 31, 1932

ASSETS		LIABILITIES AND CAPITAL	
Cash	\$ 7,860.94	Accounts Payable	\$ 3,018.66
General Fund Investments	9,100.00	Reserves:	
Accounts and Notes Receivable	4,447.51	Prepaid memberships	\$23,546.30
Interest Accrued on Investments	4,683.81	Nut Tree Project	3,801.73
Inventories	6,350.94		27,348.03
Deferred Charges	408.55	Deferred Income	392.34
Furniture and Fixtures	3,536.20	Surplus	278,859.47
Special Revolving Fund	10,000.00		
Endowment Fund	248,230.55		
Building Fund	15,000.00		
TOTAL	\$309,618.50	TOTAL	\$309,618.50

INCOME AND EXPENSE ACCOUNT FOR YEAR ENDED DECEMBER 31, 1932

(Exclusive of Reserve Account Income)

EXPENSE		INCOME	
General Administration	\$26,535.68	Membership Dues	\$56,360.24
Magazine	35,855.33	Miscellaneous Magazine Sales	762.09
Membership Solicitation	13,083.65	Advertising (Net)	9,087.89
Forester's Office	8,263.19	Interest, exclusive of portion necessary to maintain Life and Patron Memberships	11,447.04
Educational Publicity	4,264.00	Donations	9,197.30
Excess of Income over Expenses	5,909.30	Forester's Office	6,026.00
		Miscellaneous	1,030.59
TOTAL	\$93,911.15	TOTAL	\$93,911.15

NATIONAL NUT TREE PLANTING PROJECT

Income and Expenditures for the Year Ended December 31, 1932

EXPENSE		INCOME	
Salaries	\$1,200.00	Unexpended Balance, January 1, 1932	\$7,360.40
Shipping Expense	372.66	Interest on Savings Account	186.60
Printing and Mimeographing	214.61	Donations	20.00
Publicity	177.95		
Telegrams, Postage and Supplies	97.25		
Nursery Charges	334.77		
Auditing	25.00		
Tax on Checks	1.12		
Unexpended Balance December 31, 1932	5,143.64		
TOTAL	\$7,567.00	TOTAL	\$7,567.00

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What the Association Is Working For

A DEQUATE FOREST FIRE PROTECTION by fed-
eral, state, and other agencies, individually and in co-
operation; the REFORESTATION OF DENUDED LANDS,
chiefly valuable for timber production or the protection of stream-
flow; more extensive PLANTING OF TREES by individuals,
companies, municipalities, states, and the federal government; the
ELIMINATION OF WASTE in the manufacture and consump-
tion of lumber and forest products; the advancement of SOUND
REMEDIAL FOREST LEGISLATION.

The ESTABLISHMENT OF NATIONAL AND STATE
FORESTS where local and national interests show them to be
desirable; the CONSERVATIVE MANAGEMENT OF PUBLIC
AND PRIVATE FORESTS so that they may best serve the per-
manent needs of our citizens; the development of COMMUNITY
FORESTS.

FOREST RECREATION as a growing need in the social
development of the nation; the PROTECTION OF FISH AND
GAME and other forms of wild life, under sound game laws; the
ESTABLISHMENT OF FEDERAL AND STATE GAME PRE-
SERVES and public shooting grounds; STATE AND NATIONAL
PARKS and monuments where needed, to protect and perpetuate
forest areas and objects of outstanding value; the conservation of
America's WILD FLORA and FAUNA.

The EDUCATION OF THE PUBLIC, especially school chil-
dren, in respect to our forests and our forest needs; a more aggres-
sive policy of RESEARCH AND EDUCATIONAL EXTENSION
in the science of forest production, management, and utilization, by
the nation, individual states, and agricultural colleges; reforms in
present methods of FOREST TAXATION, to the end that timber
may be fairly taxed and the growing of timber crops increased.

Member A. B. C.

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SAP, SUGAR AND SHEEPSKINS

(Continued from page 115)

and neighbors from all over East Parsonfield were notified that on a certain evening Corporal John and his good wife were going to sugar-off, that each would be expected to make his own sheepskins although a generous supply would be made up ahead.

On the night chosen for the party there was usually a full moon, and during the day, perhaps, enough new snow had fallen to make it ideal for the sheepskins, for fresh soft snow is much to be preferred to the old, granulated kind. Corporal John and the hired man had constructed a sort of trough of rough boards, perhaps twenty feet long and three feet from the ground. This they had filled with snow. On it members of the party would drop the hot syrup and watch it flatten and cool into a sort of maple wax, or sheepskin. I suppose it is the thin, parchment-like form in which the syrup cools that gives it that name. At any rate, there is said to be no limit to the number of them that may be consumed at a party, a thousand or more for a small gathering being not unusual.

It was a merry group that responded to Corporal John's bid. The moonlight shone on happy faces as the guests gathered about the boiling-place. Much tasting of the hot syrup was necessary to determine whether or not it was ready to "sugar," and when the bubbling, amber mass threatened to boil over the catastrophe was only avoided by hastily thrusting into it a long stick on which was tied a piece of fat pork.

At last Corporal John announced that the syrup was ready and that everyone was to take a wooden paddle and dip out his own.

Then the fun began. The guests had long ago eaten up the sheepskins that had been made beforehand and they were all hungry for more. So when the word came to dip in they were standing about ready. They dripped the sticky stuff from the kettle to the trough of snow. Back and forth they went, jostling each other, singing and telling stories while the sheepskins cooled. For well they knew that no talking could be done while eating the precious confection. There is nothing so sticky as a sheepskin in the mouth.

And as the long spring evening passed and the moon rode high over Mt. Randall, the syrup simmered low in the black kettles and the fire became a smouldering mass of coals. Then the sheepskin party broke up. Sugaring-off was over and already the music of the sap as it had dripped from the sumach spile into the bucket was but a memory.

This was 150 years ago. Corporal John lived to be ninety-six years old, and every spring during his life and every spring since he passed on, the rocky old hillside has been the scene of a sugaring-off. Many of the big maples of his day are gone but others have grown to take their places, and still others are growing for future years.

And this very spring his descendants of the fifth generation will drive the two-wheeled ox-cart down the rough road to the sap-orchard, tap the maples and clamber down the hillside with brimming buckets of sap. They will boil down and sugar-off, only now they have a sugar-house and a modern evaporator. But they don't make sheepskins! They call it maple fudge now!

Ohio Women Plant 1,000,000 Trees

The Ohio Federation of Women's Clubs has completed the planting of 1,012,639 trees as their part in the George Washington Bicentennial program recently completed. The trees were planted in private and public areas.

WHO'S WHO

Among the Authors in This Issue

In charge of the Branch of Grazing, United States Forest Service, C. E. RACHFORD (*Regulated Hunting on the Pisgah*) devoted his early days to ranching in the West. In 1905 he was appointed ranger in the United States Forest Service, becoming Supervisor of what is now the Modoc National Forest in Northern California three years later. In 1915 he was transferred to San Francisco as Assistant District Forester in charge of Grazing, going to Washington, D. C., as Inspector of Grazing in 1922. Six years later he succeeded Will C. Barnes as Assistant Forester in charge of the Branch of Grazing.

DAREL MCCONKEY (*Tree Emigrants*) was formerly assistant extension editor for the West Virginia University Agricultural Extension Service. He is now in Washington, D. C., devoting his time to writing magazine and newspaper articles, a number of which have appeared in AMERICAN FORESTS. He attended both Davis and Elkins College and West Virginia University.

MARY CARPENTER KELLEY (*Sap, Sugar and Sheepskins*) is a special writer on nature subjects and antiques for a number of New England newspapers, and has written considerably for magazines.

P. L. BUTTRICK (*The Romance of Cork*) is a consulting forester with headquarters at New Haven, Connecticut. A graduate of the Yale Forest School, he has served as professor of forestry at Michigan State College, and as Secretary of the Connecticut Forest and Park Association. In addition to having won distinction as an expert and writer on forestry and grazing subjects, he is one of the foremost authorities in America on cork. Recently he made an exhaustive study of cork in Europe and Africa.

PHILIP W. AYRES (*Conservation Leaders in Congress—Senator Henry W. Keyes*) is Forester for the Society for the Protection of New Hampshire Forests, with headquarters at Boston, Massachusetts. A native of Iowa, Mr. Ayres holds degrees of Ph.B., from Cornell University; Ph.D., from Johns Hopkins University, and D.Sc., from the University of New Hampshire. From 1889 to 1895 he was Secretary of Associated Charities of Cincinnati, and served as Secretary for the Bureau of Associated Charities of Chicago until 1897. Later, he studied in a number of European countries, giving special attention to the activities of charity organizations, and followed this work in New York City. In 1900 he gave his full time to forestry in the capacity in which he now serves.

WAKELIN MCNEEL (*Forest Page for Boys and Girls*) is a leader in club work for boys and girls in Wisconsin, making his headquarters at Madison. For the past two years he has been conducting this department for boys and girls. An active worker, he has had much to do with the advancement of juvenile club work in his State.

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